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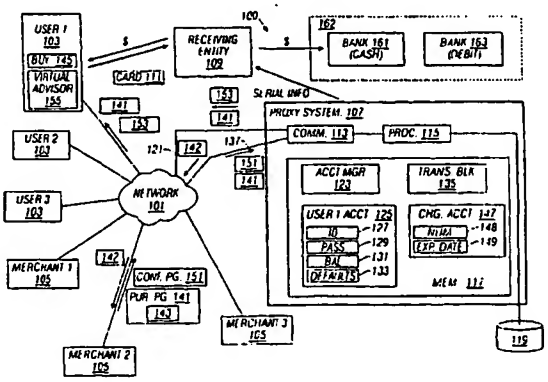

(57) Abstract: An online purchase system (100) that provides a universally accessible, anonymous and secure online payment option for consumers. A user (103) pays cash and receives a serial number. The serial number may be imprinted on a cash card (111) or the like for convenience. The user accesses an online proxy system (107), which establishes a cash account (125) using the serial number and allows the user to conduct online transactions using the cash account. The user accesses the cash account (125) with a user ID (127) and password (129), which may be arbitrarily chosen to maintain anonymity. The proxy system (107) includes at least one universally accepted charge account (147) that is used to conduct transactions on behalf of the user (103). The user surfs the Internet (101) for goods and services of online merchants (105). The user selects items to purchase and indicates the desire to purchase the selected items by selecting or interfacing a buy button (145) or the like. The proxy system (107) intercepts the purchase request, compares the user's account balance (131) with the total purchase amount (143) to verify sufficient funds, adjusts the account balance (131) if there are sufficient funds, and populates a purchase page (141) from the merchant with valid charge account information to complete the purchase. The cash cards (111) may be dispensed at a currency receiving vending machine, dispensing unit (109) or the like. The serial number incorporates a monetary value, and may further include sponsor, dispensing unit, or temporal information as desired.

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AN ONLINE PURCHASE SYSTEM AND METHOD

Related Applications

The present application is a continuation-in-part of U.S. Patent Application entitled Prepaid Card Based Internet and Merchandiser Sales and Advertising System, Serial Number 09/384,581, filed August 27, 1999 which is incorporated herein by reference in its entirety and made part of the present application.

Field of the Invention

The present invention relates to e-commerce and, more particularly, to an online purchase system that provides a universally accessible, anonymous and secure online payment option for consumers.

Background of the Invention

The explosion of the Internet has led to new methods of doing business generally referred to as e-commerce. E-commerce has become fairly common and involves many types of online transactions over the Internet, or any other global network, including business-to-business and business-to-consumer type transactions. Consumers can shop for and purchase goods and services online without leaving the home or the computer. In the consumer world, the primary method of conducting purchases is the use of a credit or debit card, otherwise referred to as a charge card. The consumer provides the charge number and expiration date and any other information that may be required such as name and address, etc. on a purchase page from an online merchant. The online merchant verifies the charge information, either during the immediate transaction or soon thereafter, and completes the purchase upon verification. Other billing methods have been used such as by mail or cash on delivery (COD), but these other methods are more costly and are certainly not as convenient to both merchants and consumers. Another technique referred to as e-wallet is becoming more popular but is still credit based and requires a valid charge account.

There are people who choose not to have a charge card, people who have a charge card but want their charge number and their name to remain confidential, and many people who are unable to obtain a charge card, such as under-aged individuals. Further, many people desire to remain anonymous and yet still have the convenience of purchasing online. The use of a

charge card precludes anonymity since the merchant verifies the account through the sponsor of the charge card and therefore has access to the identity of the purchaser. Methods of billing by mail or COD are limited and are not satisfactory for various reasons, including lack of convenience and potential lack of anonymity.

It is desired to provide the convenience of charge cards for conducting online purchases on the Internet or any other global network to those people who have the necessary funds or cash but who cannot or would rather not use charge cards.

Summary of the Invention

A method of enabling online purchases via a network and an online proxy system according to the present invention includes establishing, by the online proxy system, a prepaid cash account for a user entity, providing online access to the cash account upon receiving an identification value, receiving a purchase request with a corresponding purchase amount from the user entity to purchase selected items from a merchant via the network, verifying whether the cash balance of the cash account is sufficient to cover the purchase amount, and providing, by the online proxy system, valid charge account information associated with the online proxy system to the merchant via the network to consummate sale. The cash account includes the cash balance and is associated with the identification value that enables access to the cash account. In this manner, the user entity, after establishing a cash account with the proxy system, is able to conduct online transactions using the cash account via the proxy system. The user entity need not establish a credit or debit account to perform online transactions, as this is handled by the proxy system. The proxy system provides valid charge account information that is pre-established by the proxy system and that is used to complete transactions initiated by the user entity.

The online purchasing method may further include receiving an amount of cash or currency, providing a corresponding serial number, detecting an online inquiry to create the cash account, receiving and verifying the serial number, creating the cash account with the cash balance corresponding to the amount of currency received, and enabling online access to the cash account using the identification value. In this manner, the user entity provides cash in exchange for a serial number that is used to establish the cash account. The cash may be received by any of a plurality of methods, such as a currency accepting unit or automated dispensing unit (ADU) or a vending machine or the like. The serial number may encode the cash amount received, where the ADU prints the serial number on the cash card and dispenses the cash card.

The user entity, after receiving the serial number, connects to the network (for example, goes online) to establish the cash account. The method may further comprise prompting the user entity for a user identification and a corresponding password, verifying validity of the user identification and password according to at least one criterion (such as a predetermined minimum number of alphanumeric characters or the like), and receiving and storing the user identification and password as the identification value used for the cash

account. Thereafter, the proxy system prompts for, receives and verifies the user identification and password before providing access to the cash account.

Once the user entity has established and logged in to the cash account, the user entity may then perform online transactions via the proxy system. During a transaction, the user entity selects goods or services from any merchant and ultimately receives a purchase page describing the items to be purchased along with a purchase amount. The purchase page is received at the proxy system, which scans the purchase page for a predetermined key word. Alternatively, a transaction icon may be displayed at the user entity where selection of the transaction icon by the user entity is detected by the proxy system to denote a purchase request. In one embodiment, a transaction frame may be displayed around a browser window at the user entity, where the transaction icon is provided on the transaction frame. The transaction window may be displayed at the user entity where the transaction icon may be provided on the transaction window.

In an alternative embodiment, the online purchasing method may comprise invoking a transaction manager that maintains an online session with the user entity via the network. In this case, the method further includes the transaction manager providing a separate session link with the network that is controlled by the user entity via the transaction manager. In this embodiment, the transaction manager at the proxy system receives and forwards browser requests from the user entity to the network, receives responses from the network and forwards the responses to the user entity. The transaction manager may be implemented at the proxy system or may be divided between the user entity and the proxy system. For example, a virtual advisor program may be loaded or installed at the user entity, where the virtual advisor program cooperates with a transaction program at the proxy system to perform transaction functions. The virtual advisor program may be added to a browser as a routine or plug-in that is readily available to the user entity from a tool menu or task bar on the browser.

In further embodiments, the online purchasing method may include invoking an account manager that verifies the identification value and provides online access to the cash account, invoking a transaction manager that tracks and manages online browsing by the user entity, and retrieving, by the transaction manager, the purchase amount from a purchase page from a selected merchant in response to receiving a purchase request from the user entity and verifying whether the cash balance is sufficient to cover the purchase amount. The transaction manager may access a universally accepted charge account information associated

with the proxy system, where the transaction manager then populates the purchase page with the charge account information and forwards the populated purchase page to the selected merchant to complete the sale. The account manager compares the purchase amount with the remaining balance in the cash account and rejects or accepts the purchase request based on whether sufficient funds are in the cash account.

The charge account information associated with the online proxy system may comprise a charge account associated with a universally accepted creditor. The charge account information is corresponded or otherwise associated with the cash account. In this manner, the credit, debit or other charge account information of the proxy system is used to complete the sale with the merchant as long as the user entity has sufficient funds in the proxy cash account. The user entity, therefore, does not need to have a credit or debit account and only needs the cash account established at the proxy system.

Online merchants typically send a confirmation page to the purchasing entity to verify the sale. In further embodiments, the online proxy system intercepts the confirmation page from the merchant and forwards the confirmation page or a substitute confirmation page to the user entity. If the confirmation page includes proxy charge account information, then it may not be desired to forward that information to the user entity. The proxy system may forward a substitute confirmation page or a masked confirmation page to the user entity. The substitute confirmation page may comprise a separate proxy confirmation page generated by the proxy system incorporating some of the information from the merchant and not including any charge account information of the proxy system. Alternatively, the proxy system intercepts the confirmation page from the merchant, masks the charge account information, and forwards the masked confirmation page to the user entity.

The online purchasing method may further comprise tracking transaction activity of a plurality of cash accounts and generating aggregate purchase information associated with the plurality of cash accounts. The method may further including tracking purchases associated with the cash account and awarding reward points to the cash account for eligibility to receive spending- or purchase-related promotional goods or services. The method may further include detecting a search request associated with the purchase request from the user entity, identifying selected items on a purchase request and conducting an online search for pricing of items similar to the selected items. The method may further comprise invoking an account manager that enables the user entity to perform management functions on the cash

account. Such management functions may include splitting the cash account into a plurality of dependent subaccounts or dividing the cash account into a plurality of separate and independent cash accounts.

An online purchasing system according to the present invention incorporates any of the functions previously described to enable transactions by a user entity. The online purchase system includes a communication system that enables communication via the network, an account activation system that creates a cash account, an account manager that enables access to the cash account, and a transaction system that serves as a proxy for the user entity to access online merchants. The account activation system may further include a serial number verification system, a serial number decoding system, an identification system that establishes an identification value to enable online access to the cash account, and a charge account system that associates the cash account with valid charge account information. The account manager compares a purchase request with an account balance to verify sufficient funds and also maintains an accurate account balance. The transaction system detects a purchase request from the user entity, cooperates with the account manager to verify sufficient funds, and provides charge account information to selected merchants to complete a purchase.

In more particular embodiments, the user entity provides cash and receives a serial number on a cash card. The serial number may be preprinted on the cash card or may be printed on the cash card at the point of sale by a validation unit, such as a vending machine or ADU or the like. The validation unit prints the serial number on an unvalidated cash card to provide a valid dated cash card upon purchase. The cash card may include a magnetic strip that incorporates a partial serial number, where the validation unit reads the partial serial number from the magnetic strip to generate a valid serial number for printing on the cash card. Alternative embodiments contemplate the use of wireless communication devices, such as cell phones and PDA devices or the like, for receiving a serial number in exchange for cash. The serial number is wirelessly transmitted to the device for use by the user entity to create a cash account with the proxy system.

In further embodiments, an encryption unit may be provided to encode the monetary value received from the user entity into the valid serial number. The encryption unit may further encode any combination of other information into the valid serial number, such as

card sponsor information, location information, and temporal information. The temporal information may include a time stamp and a date stamp or the like.

It is appreciated that an online purchasing system according to the present invention provides a universally accessible, anonymous and secure online payment option for consumers. In certain embodiments, a user pays cash and receives a serial number, which may be imprinted on a cash card or the like for convenience, or otherwise transmitted electronically, either using a wired or wireless network. A serial number received by one user may be transferred to another user, such as using email or the like. The user accesses an online proxy system to establish a cash account using the serial number, which then enables the user to conduct online transactions using the cash account. The user accesses the cash account with a user identification (ID) and password, which may be arbitrarily chosen to maintain anonymity of the user. The proxy system includes at least one valid charge account that is used to conduct transactions on behalf of the user. The user surfs the network for goods and services of online merchants, such as the Internet or the like. The user selects items to purchase and indicates the desire to purchase those selected items by selecting or interfacing a buy button or the like. The proxy system intercepts the purchase request, compares the user's account balance with the total purchase amount to verify sufficient funds, adjusts the account balance if there are sufficient funds, and populates a purchase page from the merchant with valid charge account information to complete the purchase. The cash cards may be dispensed at a currency receiving vending machine, ADU, or the like. The serial number may incorporate any type of information such as a monetary value, sponsor information, ADU information, temporal information, etc.

Brief Description of Drawings

A better understanding of the present invention can be obtained when the following detailed description of the preferred embodiment is considered in conjunction with the following drawings, in which:

FIG. 1 is a block diagram representing the relationships between the main elements that comprise the Prepaid Card Based Internet and Merchandiser Sales and Advertising System.

FIG. 2 is a block diagram representing the relationships between the main elements that comprise the Prepaid Card System.

FIG. 3 is a block diagram representing the relationships between the main elements that comprise the Electronic Commerce Marketing and Advertising System (IMAGE: Interactive Marketing and Advertising Gateway for Electronic Commerce).

FIG. 4 is a block diagram representing the relationships between the main elements that comprise the Automated Telephone System.

FIG. 5 is a block diagram representing the relationships between the main elements that comprise the Overseer Website.

FIG. 6 is a block diagram representing the relationships between the main elements that comprise the Account Management System.

FIG. 7 is a block diagram representing the relationships between the main elements that comprise the Promotional Website.

FIG. 8 is a block diagram representing the relationships between the main elements that comprise the Consumer Behavior and Ad Campaign Database System.

FIG. 9 is a block diagram representing the relationships between the main elements that comprise the Transaction Tracking System.

FIG. 10 is a block diagram of an exemplary e-commerce proxy purchase system according to an embodiment of the present invention.

FIG. 11 is a more detailed diagram of an exemplary embodiment of the proxy system of FIG. 10.

FIG. 12 is a block diagram of an exemplary automated dispensing unit (ADU) utilized for dispensing prepaid cash cards supplied with serial numbers in accordance with the present invention.

FIG. 13 is a block diagram of another ADU similar to the ADU of FIG. 12 but further connected to a network and including live advertising display.

FIGs. 14A and 14B are front and back views, respectively, of an exemplary cash card utilized for the convenience of conveying a serial number in exchange for cash or currency from a user or consumer.

FIG. 15 is a screen shot of an exemplary welcome page that may be used as the initial web page when a user visits a web site associated with the proxy system of FIG. 10.

FIG. 16 is a screen shot of an exemplary account activation page that may be displayed upon selection of a new card activation link from the welcome page of FIG. 15.

FIG. 17 is a screen shot of an exemplary account information page for providing account information to the user of a cash account of the proxy system.

FIG. 18 is a screen shot of an exemplary account recharge page which may be used for enabling a user to recharge one or more cash accounts utilizing cash cards, cash, checks, money orders or different types of accounts such as credit or bank accounts.

FIG. 19 is a screen shot of an exemplary cash card recharge page for recharging one or more cash accounts with additional cash cards.

FIG. 20 is a screen shot of an exemplary account management page that is displayed to enable a user to access and perform account management functions.

FIG. 21 is a screen shot of an exemplary transaction page that may be displayed and utilized by a user to perform online transactions using a cash account established at the proxy system.

FIG. 22 is a screen shot of an exemplary frame transaction page for facilitating purchases and other online transactions by the user according to one embodiment of the present invention.

FIG. 23 is a screen shot of an exemplary virtual advisor window or page that is used at the user entity computer to facilitate online transactions via the proxy system.

Detailed Description of the Invention

FIG. 1 is a block diagram representing the relationships between the main elements that comprise the Prepaid Card Based Internet and Merchandiser Sales and Advertising System. The prepaid card system is shown in relation to the advertising system (IMAGE, Interactive Marketing and Advertising Gateway for Electronic Commerce). All numbers are the same as used throughout, and FIG .1 will be explained in detail in FIGs. 2, 3, and 4.

FIG. 2 is a block diagram representing the relationships between the main elements that comprise the prepaid card system. The distribution, activation, and basic account management of such prepaid cards are outlined herein. Corporation 1 sells an unspecified number of cards 2 to an assortment of retailers and distributors 3. The retailers (distributors) pay the Corporation for the cards or take them on a consignment agreement. Retailers sell the card to the consumers 4 and collect a commission percentage.

The consumer logs in (connects to) to the Corporation card account management system 7 using one of the following methods: via automated telephone system 5, via an Internet server or master computer 6. The card management system 7 also ties in to the card tracking system 14. Connection via the automated telephone system 5 is achieved in the following fashion: The consumer 4 calls a toll telephone number that is directly connected to the automated telephone system 5 merchants 8, also called service providers, and interacts with the customers and the Corporation, as will be covered in more detail in later paragraphs.

FIG. 3 shows a group 9 of publishers and advertising and marketing agencies in offline media with current advertisers 10 for campaigns run by group 9 and targeted at consumers 11 who may not have purchased cards 2. The Corporation 1 seeks these groups to form a nonexclusive alliance along with merchants 8, explaining benefits to the group from interaction with the card interaction system 7, discussed later, and the web site 6, promotional web sites 12 and card transaction tracking system 14, all of which interact with consumer behavior and ad campaign database system 13.

FIG. 4 shows the main elements that comprise the automated telephone system and is a system commonly available through normal commercial sales channels. The functions described below are handled by such system without the addition of special hardware. Once the connection is established, the user or consumer 4 is prompted by the automated telephone

system 5 to push the #1 key on his/her telephone keypad if a touch tone telephone is being used by the user at the moment of the call, or to say the word "one" if a touch tone phone is not available. The words "one" and "zero" are recognized by the voice recognition unit 15. At this point, the user is also prompted to push the #0 keypad, or wait a few seconds in order to speak with an operator. If the user pushes the #1 keypad, then the communication is routed to the touch tone processing unit 16. If any keys other than the #1 or #0 keys are pressed and the voice recognition unit 15 does not recognize the words "one" or "zero", then the user is prompted once again to enter a valid command by pushing the appropriate keys on the keypad, or by saying the appropriate number. If this process is repeated more than three times and the consumer 4 does not connect with the main processor 17, then the connection is routed to an operator who will have access to the site and who will conduct the account management operations for the customer to enter into the card account management program 7.

According to the response type--voice or data--the system will route the call to either the voice recognition unit 15 or the touch tone processing unit. These components of the automated telephone system 5 serve as a translating unit to the main processor 17 for the automated telephone system 5. In the case of the voice recognition system 15, the voice commands are translated into digital signals that the main processor 17 can recognize. In the case of the touch tone processing unit 16, tone signals from the consumer's 4 telephone unit are translated into digital signals that the main processor for the automated telephone system 17 can recognize.

FIG. 5 shows the main elements that comprise the overseer website as interconnected to the Internet server or master computer 6 with numbers shown internally for clarity. In order to access the overseer website, the consumer 4 must first establish a connection to the master computer 6 that controls the functions of the website. The consumer 4 establishes the Internet connection by using either a modem connection or a direct network connection (ADS, Cable Modem, T1, T3 connection as provided by an independent Internet service provider or hosting entity (e.g., UNIT, AOL, AT&T) to link his/her computer to the Internet server 6. Users access the global network online system (Internet) by using one of several third-party operating systems and Internet browsers (e.g., Microsoft Internet Explorer, Netscape Navigator) to point their Internet connection to the I.P. (Internet protocol) address

associated with the site domain (i.e., site). This might be carried out by simply typing the following: http://www.netspend.com on the search bar of the corresponding Internet browser program for an entity netspend.com. Note, even though the site is the Internet server site 6, the Corporation will expand the use of Internet domains to include each of its marketing campaigns. Thus, users could log on to another Internet gateway server configured similarly to the Internet server 6 by entering the corresponding domain in the browser search bar.

In order to proceed with the card activation process, the consumer 4 will navigate through an assortment of web forms using the same Internet browser program that he/she employed to make the connection to the server 6, as it creates and updates changes to the account corresponding to the card 2 purchased.

Once the connection has been established by either one of the aforementioned methods, the Internet server 6 will automatically run the welcome program/script 21, which in turn will initiate the login script of the consumer accounts program 19. The login script 22 will prompt the consumer 4 to enter the serial number found on the back of the card 2. If the consumer 4 used the automated telephone system 5, then the consumer 4 will use the numeric keys on his telephone keypad to enter the numbers that correspond to the serial number contained on the back to the card purchased 2 if the phone used by the consumer has the ability to produce touch tones capable of interacting with the touch tone processing unit 16, FIG. 4. Otherwise, the consumer 4 will say the numbers for the voice recognition system 15 to process into digital signals usable by the main processor 15 of the automated telephone system. A final alternative will be for the consumer to wait for the automated telephone system 5 to route the call to an operator, and for the consumer 4 to give the serial number to the operator for processing.

Regardless of the method used, the consumer 4 will be prompted to enter either a valid serial number (as described above) in order to create a valid user name, or to enter a valid user name for a pre-existing account. The user name is a pseudonym, a nickname, with no relation to the consumer's real identity (a minimum of 8 characters is required for this step). By this means, the consumer's identity is protected and confidentiality and privacy are ensured. If the consumer 4 does not have a valid username, as will be the case with new users, then the login script 22 of the consumer's account program 19 will direct the consumer

to the forms associated with the new accounts program 23; otherwise, it will direct the consumer 4 to the account management program 24 forms.

As part of the new accounts program 23, the user will fill out several forms that are part of a program script that will gather the necessary information to create a new card account. The information required during this process includes, but is not restricted to, the following: card serial number, user name, and personal identification number. The serial number will correspond to the one found on the card, while the user name and personal identification number will be created by the consumer 4 following a set of rules described within the new accounts program 23 forms. The identification number combined with the user name created in the previous step will be entered into the account management program 24 and the transactions program 25 using the user identify action as described to ensure the security of the account. The rules will be set in order to maximize the security of the account and to provide maximum compatibility with payment systems used by merchants 8 and are subject to change as the number of consumers 4 subscribing to the card services increases or the payment systems used by the merchants 8 change. Programs 23, 24 and 25 feed into other programs that are discussed later herein.

As merchants 8 enter the system, they connect into the merchant account program 20 which is part of the card Internet server program 18 in the main computer. Within the merchant account program 20, there is a welcome program 26, a login program 27, a new account program 28, an account management program 29, and a validation program 30, all of which feed into other programs discussed later herein.

Both the card Internet server 18 and the merchants account program 20 feed into the card account management program 7 and the card tracking system 14.

The non-restrictively allied groups comprising publishers and advertising and marketing agencies 9, offline advertisers 10, merchants 8, and the Corporation 1 all interconnect with program 31 called the IMAGE Internet server 31 and with programs within the master computers. Program 32 is a welcome script, 33 is a login program, 34 takes new account data and interacts with an account management program 35 and publisher account cata 68, merchant account data 69, password account data 71 and user or customer account data 73.

Account management data 35 interconnects with search program 36, monitoring program 37, update and renew program 38, and market analysis program 39. In turn, programs 36, 37 and 39 interact with user account data 73. Program 38 further interacts with publisher account data 68, merchant account data 69 and password account data 71. Market analysis program 39 interacts with event data 74 and backup data 81. Through the master computer, essentially all programs interact with the consumer behavior and ad campaign database system 13.

FIG. 6 shows the main elements that comprise the account management system 7 shown in bold lines for clarity. The account management system 7 is comprised of a computer system that contains a user account program 4, receiving data from the automated telephone system 5 and a distributor and merchant account management system 41. The computer system is linked on a computer network to the master computer that serves the overseer website 6 in order to provide full interaction between the programs contained in the overseer website (Overseer Internet server) and those contained within the account management system 7 computer also shown in FIG. 2.

FIG.6 further shows a create new account program 48, an account data storage 49, a data encryption program 50, and a database management program 51, all of which interact with each other and the card tracking system 14 and programs 28 and 29 previously discussed.

The new accounts program 23 of the Internet server 6 consumer accounts program 19, FIG. 5, will in turn initiate the create new account program 42 contained within the user account program 40 of the account management system 7. The information entered by the consumer during the procedures of the new account program 23 will be handled by the database management program 45, which will in turn transfer the information to the account data storage 43, where the account serial number, balance, user name and personal identification number will be stored for future reference. In the process, the data stored in the account data storage 43 is encrypted by the encryption program 44 to ensure the integrity of the information contained within the system so that access to the account data storage, or its back-up auxiliary data storage 46, and 2nd auxiliary data storage 47 requires authentication by the encryption program. This feature of the user account program 40 prevents

unauthorized parties from accessing the information contained within its data storage elements 43, 46, 47.

Completion of the create new account program 42 and the new account program of the Internet server 6 consumer accounts program 19, initiates the account management program 24, FIG. 5.

The consumer 4, FIG. 5, enters the account management program 24 when either one of the following occurs: a proper user name + personal identification number combination is entered during the login script 22, or the new account program 23 has been completed successfully. As part of the account management program 24, the consumer 4 navigates through an assortment of forms that are linked by scripts. Within these forms, the consumer 4 will be able to perform a variety of accounting tasks according to his/her disposition of the funds available for the specific account corresponding to the user name + personal identification number combination entered. The account management program 24 performs these functions by channeling the information entered in the forms contained within its limits to the appropriate elements of the database management program 45 of the account management system 7.

The information entered by the consumer during the procedures of the account management program 24 will be handled by the database management program 45, which will in turn transfer the information to the account data storage 43, where the account serial number, balance, user name and personal identification number will be stored for future reference. In the process, the data stored in the account data storage 43 is encrypted by the encryption program 44 to ensure the integrity of the information contained within the system so that access to the account data storage, or its back-up auxiliary data storage 46, and 2nd auxiliary data storage 47 requires authentication by the encryption program. This feature of the user account program 40 prevents unauthorized parties from accessing the information contained within its data storage elements 43, 46, 47.

The main accounting functions that the consumer 4 can perform within the account management program 24 are as follows:

If the customer has (an) additional pre-existing account(s), the account management program 24 can add the amount of the current card purchase to the previous balance from any

existing account. In this fashion, the customer can consolidate several accounts under the account corresponding to the user name of the active session. Either a serial number (in the case of cards not yet activated), or a serial number + personal identification number or user name + personal identification number combination (in the case of active cards) for the accounts that the consumer wants to consolidate is required for this transaction.

The process for this transaction is as follows: The consumer 4 selects the addition/consolidation of funds script option from the account management program 24. The addition/consolidation of funds script then prompts the user to enter the number of pre-existing accounts that he/she would like to select as "transfer funds from:" accounts. The program takes this number and creates a form with a number of form fields available for the consumer 4 to enter a serial number + personal identification number, user name + identification number combination that corresponds to the number of accounts selected for fund transfer. The account management program 24 in turn relays the information to the database management program 45 which matches the serial number information with the serial numbers of existing accounts stored in the account data storage 43, 46, 47 and updates the balance on the accounts to reflect the transaction completed by the consumer 4. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 in order to maintain security of the system.

The consumers 4 can also use external sources to increase the balance of their card 2 account. This is done by selecting the "add funds from credit card, debit card or bank account" script from the account management program 24. Then, depending on the selection made by the consumer, the script of the account management program 24 directs the consumer through the forms that correspond to the form of payment selected. Within the forms, the consumer is prompted to enter the necessary information to conduct the transaction as per the requirements established by the financial institution. Examples of the information gathered at this point are name, credit card or debit card number, expiration date, billing address or institution name, bank account number, bank account type, and ABA routing number (in the case of bank accounts). The information gathered during the transaction is then delivered to the corresponding banking or credit agency authority or clearinghouse for

verification of funds on the specified external account. It is the financial institution's responsibility to deduct the amount transferred from the consumer's account balance. If the account and the requested transfer amounts are validated and approved by the financial institution, then the account management program 24 sends the transfer amount information to the database management system 45 which in turn updates the account data storage elements 43, 46, 47 to reflect the changes on the specified card 2 account. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 to maintain security of the system.

The customer can also distribute the funds from any account into several accounts. The process for this transaction is as follows: The consumer 4 selects the split/distribution of funds script option from the account management program 24. The split/distribution of funds script then prompts the user to enter the number of pre-existing accounts that he/she would like to select as "transfer funds to:" accounts. The program takes this number and creates a form with a number of form fields available for the consumer 4 to enter a serial number + personal identification number, user name + identification number combination that corresponds to the number of accounts selected for fund transfer. The account management program 24 in turn relays the information to the database management program 45 which matches the serial number information with the serial numbers of existing accounts stored in the account data storage 43, 46, 47 and updates the balance on the accounts to reflect the transaction completed by the consumer 4. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 to maintain security of the system.

In the event that the consumer wants to create a sub-account, the consumer 4 would have to follow the following process: The consumer 4 selects the "create sub-account" script option from the account management program 24. The "create sub-account" script then prompts the user to enter the number of sub-accounts that he/she would like to select as "transfer funds to:" accounts. The program takes this number and creates a form with a

number of form fields available for the consumer 4 to enter new user name + identification number combinations that correspond to the number of sub-accounts accounts selected for fund transfer. The "create sub-accounts" program then assigns serial numbers to those accounts, ensuring in the process that the new serial numbers do not conflict with regular card account serial numbers. This can easily be accomplished by adding a prefix to the serial number that labels the new account as a user-created account. Once this step has been completed, the account management program 24 in turn relays the information to the database management program 45, which matches the serial number information of the original account and stores the new serial numbers associated with the sub-accounts created, stores the information in the account data storage 43, 46, 47 and updates the balance on the accounts to reflect the transaction completed by the consumer 4. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 to maintain security of the system.

The customer can also request disbursement of funds. By selecting this option from the account management menu, the customer initiates a process by which the Corporation will deliver the desired cash amount available to the consumer. A transaction fee will be assessed to cover disbursement expenses. This is done by selecting either one of the "add funds to credit card, debit card or bank account" scripts from the account management program 24. Then, depending on the selection made by the consumer 4, the script directs the consumer through the forms that correspond to the form of payment selected. Within the forms, the consumer is prompted to enter the necessary information to conduct the transaction as per the requirements established by the financial institution. Examples of the information gathered at this point are name, credit card or debit card number, expiration date, billing address or institution name, bank account number, bank account type and ABA routing number (in the case of bank accounts) and cash amount of transfer. In order for the transaction to proceed, the funds available must be equal to or greater than the sum of the transaction amount requested by the consumer plus the amount of the transaction fee. Should this not be true, then the account management program 24 will explain the error in the transaction and will prompt the consumer 4 to enter a new amount that satisfies the parameters established by the transaction. The information gathered during the transaction is

then delivered to the corresponding banking or credit agency authority or clearinghouse to confirm that the account information corresponds to a valid active account within the financial institution system. Having received confirmation from the financial institution, then the account management program 24 will credit the specified account with funds deducted from the consumer's card account if such funds are available. Fund availability within the card account management system 7 is verified by the database management program 45, which verifies the account balances by matching the username + personal identification number combination entered by the consumer with those stored in the account data storage elements of the system 43, 46, 47.

It is the financial institution's responsibility to update the amount transferred to the consumer's account balance. If the account and the requested transfer amounts are validated and approved by the financial institution, then the account management program 24 sends the transfer amount information to the database management system 45, which in turn updates the account data storage elements 43, 46, 47 to reflect the changes on the specified card 2 account. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 to maintain security of the system.

The consumer may choose to receive a check from his account. This will be accomplished by selecting the "mail me a check" script from the account management program 24. The script directs the consumer through the forms that correspond to the form of payment selected such as check disbursement. Within the forms, the consumer is prompted to enter the necessary information to conduct the transaction. Examples of the information gathered at this point include payee name and mailing address and amount to be disbursed. Fund availability within the card account management system 7 is verified by the database management program 45 which verifies the account balances by matching the username + personal identification number combination entered by the consumer with those stored in the account data storage elements of the system 43, 46, 47. In order for the transaction to proceed, the funds available within the card account must be equal to or greater than the sum of the transaction amount requested by the consumer plus the amount of the transaction fee. Should this not be true, then the account management program 24 will explain the error in the

transaction and will prompt the consumer 4 to enter a new amount that satisfies the parameters established by the transaction. At this point, the account management program 24 sends the transfer amount information to the database management system 45, which in turn updates the account data storage elements 43, 46, 47 to reflect the changes on the specified card 2 account. The account update is replicated throughout the account data storage elements 43, 46, 47 to ensure data integrity. Once again, the flow of information between the database management program 45 and the account data storage elements 43, 46, 47 is channeled through an encryption program 44 to maintain security of the system. In the meantime, the payee name, check disbursement amount, and mailing address are relayed to the Corporation accounts payable department. It is the Corporation's sole responsibility to ensure that the check requested is mailed to the consumer 4 within a time period previously communicated to the consumer 4 by the account management program 24.

E-commerce transactions are also facilitated. Besides enabling the consumer 4 to conduct the previously mentioned accounting functions by way of its account management program 24, the consumer account program 19, FIG.5, of the Internet server 6 also allows the consumer to perform electronic commerce transactions with a variety of participating merchants 8. From the menus found on the forms of the account management program 24, the consumer 4 can initiate the transactions program 25. The consumer 4 can use the search function found in the transactions program 25 to search for a specific item, merchant 8, or cost of an item. Once the consumer 4 has found a product or service that he/she is interested in purchasing, the transactions program directs him/her to the appropriate merchant 8. Using the transactions program 25, the Internet server directs the consumer's computer Internet browser to the IP (Internet protocol) address of the Internet server hosting the particular merchant 8's web site chosen from any of the merchant networks listed in the forms of the transactions program 8. A network merchant 8 is categorized as a merchant that honors the card 2 as a form of payment. Merchants 8 are categorized by industry and geographic networks. If the consumer 4 is aware that the merchant 8 is a participant and honors the card 2, he or she can navigate directly to the merchant's 8 website by entering the appropriate URL website in the search bar of the consumer's 4 Internet browser program instead of using the hyperlinks available from within the transactions program 25.

If there is a merchant who does not honor the card, the user can use the member services menu of the transactions program 8 to notify the Corporation, via an electronic mail contact form created by the scripts of the transactions program 25, of its desire to purchase items from the merchant 8 using a card as a form of payment. The Corporation then relays this electronic message to the merchant 8 by using an electronic mail program with the intention of persuading the merchant 8 to become a member of the card network.

The system also has a purchase recommendation feature. Based on the current available balance obtained by the account management program 24 and delivered to the transactions program, the consumer is given a list of possible merchants and items that can be purchased by the available balance. This feature helps the consumer in his spending decision by making available to him/her a wide variety of options for any specific cash amount.

Merchant accounts are as follows: The merchant 8 establishes an Internet connection by using either a modem connection or a direct network connection (ADSL, Cable Modem, T1, T3 connection) as provided by an independent Internet service provider or hosting entity (e.g., UUNET, AOL, AT&T) to link his/her computer to the Internet server 6. Users access the global network online system (Internet) by using one of several third-party operating systems and Internet browsers (e.g., Microsoft Internet Explorer, Netscape Navigator) to point their Internet connection to the I.P. (Internet protocol) address associated with the site domain (e.g., www.netspend.com site). This might be carried out by simply typing the following: http://www.netspend.com on the search bar of the corresponding Internet browser program. Note that, even though the site is the Internet server site 6, the Corporation will expand the use of Internet domains to include each of its marketing campaigns. Thus, users could log on to another Internet gateway server configured similarly to the Internet server 6 by entering the corresponding domain in the browser search bar (e.g., www.netspend.net).

FIG. 7 outlines programs within the promotional sites 12. When a consumer 10, who may or may not have a card, enters promotion site 12, contained in welcome scripts 52 will be an animation program 57, a program which outlines how he or she may obtain free gifts 54, instruction forms 56, and information disclosure forms 55, all of which interact with the database management program 51, the consumer behavior and ad campaign database system 13, PASSword database handling 58, image picture database 59, a PASSword verification program 53 with sub-programs 60 and 61, publisher database handling. program 54 outlines

how the customer tells the merchant 8 where the customer saw the free gift advertisement, which the merchant verifies. This is valuable information that is automatically handled in the system so as to give the advertiser the possibility of checking ad efficiency and contact with the merchant may lead to sales which are also entered in the system.

Merchant 8 must be in the system to reap benefits as outlined. In order to proceed with the merchant account activation process, the merchant 8 will navigate through an assortment of web forms using the same Internet browser program that he/she employed to make the connection to the server 6, as it creates and updates changes to the merchant account.

Once the connection has been established, the Internet server will automatically run the welcome program/script 26 (see FIG. 5), which in turn will initiate the login script 27 of the merchant accounts program 20. The login script 27 will prompt the merchant 8 to enter a valid merchant account number + password combination in order to access the merchant account management system 29, or to create a new account via the new accounts program 28. As part of the new accounts program 28, the merchant 8 will fill out several forms that are part of a program script that will gather the necessary information to create a new merchant account. The information required during this process includes, but is not restricted to, the following: The card merchant identification number, password, financial institution information (preferred method of payment), address, contact information, geographic network desired, industry network classification. The new accounts program 28 will generate a merchant serial number that will be assigned to future transactions conducted by the merchant 8. The new accounts program 28 will also prompt the merchant 8 to create a merchant account user name and personal identification following a set of rules described within the new accounts program 28 forms. The identification number combined with the user name created in the previous step ensures the security of the account. The rules will be set in order to maximize the security of the account and to provide maximum compatibility with payment systems used by merchants 8, and are subject to change as the number of merchants 8 subscribing to the card services increases or the payment systems used by the merchants 8 change.

The new accounts program 28 of the Internet server 6 merchant accounts program 20 will in turn initiate the create new account program 48 contained within the distributor and

merchant account program 41 of account management system 7. The information entered by the merchant during the procedures of the new account program 28 will be handled by the database management program 51, which will in turn transfer the information to the account data storage 49 where the account serial number, balance, merchant user name and personal identification number will be stored for future reference. In the process, the data stored in the account data storage 49 is encrypted by the encryption program 50 to ensure the integrity of the information contained within the system so that access to the account data requires authentication by the encryption program 50. This feature of the distributor and merchant account program 41 prevents unauthorized parties from accessing the information contained within its data storage element 49.

Completion of the create new account program 48 and the new account program 28 of the Internet server 6 merchant accounts program 20 initiates the account management program 29.

The merchant 8 enters the account management program 29 when either one of the following occurs: a proper user name + merchant identification number combination is entered during the login script 27, or the new account program 28 has been completed successfully. As part of the account management program 29, the merchant 8 navigates through an assortment of forms that are linked by scripts. Within these forms, the merchant 8 will be able to perform a variety of administration tasks. The account management program 29 performs these functions by channeling the information entered in the forms contained within its limits to the appropriate elements of the database management program 51 of the account management system 7.

The information entered by the merchant during the procedures of the account management program 29 will be handled by the database management program 51, which will in turn transfer the information to the account data storage 49, where the account serial number, balance, user name and personal identification number will be stored for future reference. In the process, the data stored in the account data storage 49 is encrypted by the encryption program 50 to ensure the integrity of the information contained within the system so that access to the account data storage 49 requires authentication by the encryption program 50. This feature of the merchant account program 41 prevents unauthorized parties from accessing the information contained within its data storage element 49.

Participating merchants 8 conduct sales transactions with consumers 4 using current electronic commerce procedures which include, but are not limited to, electronic catalogs and electronic shopping carts located within their Internet servers and readily available to the consumers 4 within the realm of the global online network such as the Internet.

The consumer makes a connection with the merchant's 8 Internet server by directing his/her Internet browser to the domain associated to the corresponding IP (Internet protocol) address. At the point of sale, the consumer provides the merchant 8 with the account number and personal identification number associated with his/her account. The merchant's server (computer) then verifies the availability of funds on the account using one of the current electronic payment programs available for the verification of credit cards. The program employed by the merchant 8 then connects via the global online network (Internet) with the Internet server 6, specifically the merchant account program 20. The merchant account program 20 verifies the merchant account user name + password combination as provided by the merchant's 8 computer in order to verify that the merchant is a participating merchant.

Once the merchant's account user name + password combination has been validated, the merchant accounts program 20 initiates a validation program 30 which in turn validates the availability of funds in the consumer's 4 account necessary to cover the transaction amount plus any transactional fees.

The mechanics of the validation process are as follows: The validation program receives the following information from the merchants 8 computer: merchant identification number, the cardholder account number, the cardholder identification number, transaction amount. If the transaction amount plus any transactional fees is less than or equal to the available balance on the account, then the validation program matches the information with the information stored within the account data storage 43 and makes the appropriate updates to the cardholder account balance as stored in the user account data storage 43, and to the merchant account balance as stored in the merchant account data storage 49. If the transaction amount exceeds the available balance, then the validation program 30 produces an error message that is relayed to the merchant's 8 computer. It must be noted that the verification program uses proprietary software using current database and encryption technology that realize the verification in a seamless, nearly automatic to the customer's eye fashion.

FIG. 8 covers the consumer behavior and ad campaign database system 13. External programs cooperating therewith are the tracking system 14, which will be further discussed under FIG. 9, and the card account system 7 discussed under FIG. 6. The Corporation promotional Internet server sites 13 have the following major internal programs: Publisher database 63, merchant database 64, PASSword database 65, user database 66 and event tracking system 67. All subroutines or programs have already been discussed.

FIG. 9 is a block diagram representing the relationships between the main elements that comprise the transaction tracking system. The transaction tracking system 14 is comprised of a computer system linked to the computers serving the overseer website 6 (Internet server), the account management system 14, and the consumer behavior and ad campaign database system 13, shown in FIG. 8.

A transaction log including all the transactions validated, successfully or not, by the validation program 30, FIG. 5, is kept by the transaction database management program 80. The transaction database management program 80 channels the information to data storage elements 81, 79 and the 2nd auxiliary data storage 83 contained within the transaction tracking system 14. The flow of information within the transaction tracking system 14 is handled by the Transaction database management program 80 and the encryption program 82, which ensures the integrity of the data stored within the system 14. Other subroutines or programs have already been discussed. Contingent on a positive verification of funds, the merchant 8, FIG. 5, delivers goods and or services to customer 4.

Funds must be transferred from the Corporation to external accounts. The mechanisms by which the Corporation disburses funds generated by the electronic commerce transactions between the consumers 4 and the merchants 8 are as follows: the Corporation makes funds available to the merchants either by an electronic transfer of funds to the merchant's choice of financial institutions, or by sending a check note from its finance department to the payee of record established by the merchant in the merchant profile, created and managed by the distributor and merchant accounts program 20. Depending on the options set within the account management menu 29, the Corporation will deliver the desired cash amount available to a merchant's established bank or credit accounts. Transaction and contract fees will be assessed during the disbursement expenses.

The process is automatic and initiated by scripts contained within the validation program 30 on every occasion that an electronic commerce transaction is validated by the account management system 7. Every time that a transaction results in a positive balance in the merchant account as stored in the account data storage 49, a combination of programs within the merchant account program 20 and the distributor and merchant account system 41 initiates a transfer of funds to the financial institution established by the merchant.

The information gathered during the transaction is then delivered to the corresponding banking or credit agency authority or clearinghouse to confirm that the account information corresponds to a valid, active account within the financial institution's system. Having received confirmation from the financial institution, then the account management program 29 will credit the specified account with funds deducted from the merchant's card account. The amount of the funds transferred equals the transaction amount minus the transactional and contractual fees assessed by the Corporation.

It is the financial institution's responsibility to update the amount transferred to the merchant's account balance. If the account and the requested transfer amounts are validated and approved by the financial institution, then the account management program 29 sends the transfer amount information to the database management system 51 which in turn updates the account data storage element 49 to reflect the changes on the specified card merchant account.

If the merchant chooses to receive a check, as indicated by the account profile established within the account management program 29, then the same process as the one established for disbursement of funds via electronic means (as described above) applies, except that instead of generating an electronic transaction, the scripts contained within the account management program 29 will generate scripts that cause the payee name, check disbursement amount, and mailing address to be relayed to the Corporation's accounts payable department. It is the Corporation's sole responsibility to ensure that the check requested is mailed to the merchant 8 within a time period previously communicated to the merchant 8 by the account management program 29.

The Corporation makes use of the information gathered by its card account management databases 45, 51, 80, 81, and its IMAGE program databases 68, 69, 71, 73, 74--

information compiled from transactions conducted in each of the model's critical steps--to create market research reports that provide information regarding the psycho-demographic patterns derived from the behavior tracked by the account management system. The market research information is accessed via the Internet Server 6, which uses information gathered and processed within the database systems 13, 14.

FIG. 3, briefly discussed earlier, represents the relationships between the main elements that comprise the electronic commerce marketing and advertising system (IMAGE: Interactive Marketing and Advertising Gateway for Electronic Commerce). Merchants/advertisers 8 enter the IMAGE program by pledging a promotional offer. The merchant logs in (connects to) to the Corporation website 6 in order to establish a new account or maintain an existing account. Merchant pledges the initial promotional offer or updates a current campaign by adding inventory through the Internet server using information gathered and processed within the database system 13. The promotional offer may consist of discounts, excess inventory items, discontinued items, informative brochures, and/or any other items that may be used in the form of a sample or gift with the intent of increasing the likelihood of a purchase transaction from the receiving consumer.

The Corporation works with advertising people, publishers/distributors and merchants to set up networks and mutually beneficial alliances.

A network refers to the consumer coverage for the distribution of a promotion. The network will vary according to the following criteria: media, geographic distribution, and industry.

The merchant can select from television, radio, or print (magazines, newsletters, newspapers and banners). Under the various media options, the merchant may select his/her distribution channels across different industry and geographic networks. Advertisement may also be provided on wireless devices, such as cellular phones or PDAs or the like, and further on billboards or banners such as alongside outdoor roadways or highways, on buildings or subway stations and the like.

The merchant can select from local, regional, national or international coverage. Under the geographic network, the merchant may select his/her distribution channels across different industries and media types.

The merchant can specify the coverage based on the industry in which he/she conducts his/her business. Under the industry network, the merchant may select his/her distribution channels across different geographies and media types.

Merchants pay a processing fee to the Corporation in accordance with the type of network selected.

The merchant/advertiser fulfills the promise to deliver free goods, services or discounts to the consumer. The merchant monitors participation rates in real time by connecting to the Internet server 6, which uses information gathered and processed within the database system 13. IMAGE media distributor/publishers 9 agree to publish an ad guaranteeing free merchandise from a number of participating Internet retailers.

The distributor/publisher enters the alliance by paying a contract maintenance fee and allowing the Corporation to place advertisements in his/her publication. The distributor/publisher monitors participation rates in real time by connecting to the Internet Server 6, which uses information gathered and processed within the database system 13.

A PASSword participant may be described as one who advertises with a distributor/publisher and is interested in checking the effectiveness of his or her advertising as rapidly as possible. The PASSword participant enters the alliance by paying a contract maintenance fee that is set as a percentage of the amount paid to the publisher by the PASSword participant for the advertising to which the PASSword verification directs customer attention.

FIG. 7, briefly discussed earlier, represents the relationships between the main elements that comprise the promotional website. The promotional websites are served by a computer that is linked on a network to the computers serving the consumer behavior and ad campaign database system 13, the transaction tracking system 14, the overseer website 6, and the account management system 7. Direct access to the promotional websites is achieved by the consumers 11 in a manner consistent with that by which consumers connect to other websites within the Internet global online network. An example of how this connection is achieved has been outlined on the description of the access to the overseer website 6 by the consumers 4 within the description of the prepaid card system.

Consumers 11, by purchasing or browsing, respond to or acknowledge the advertisement placed in the different media. As a result of the acknowledgement of the advertisement, the consumer contacts the Corporation by either telephone (via toll free numbers), or by accessing one of the Corporation promotional websites 12. Once contact has been established, the Corporation will collect specific information that will direct the consumer to an advertisement placed in the magazine by the PASSword participant 10. The PASSword ad is used to verify that the consumer participant has the IMAGE publication in hand. Once participants have logged on to one of the promotional Internet sites or they have established contact with a customer service representative, they must answer a PASSword question before moving on to claim their free promotional goods and services.

From the promotional website 12, the consumer is able to select free items, samples or discounts from a selection of merchant offerings that are targeted to the audience specific to the pre-established demographics of the advertisement media.

FIG. 8 , briefly discussed earlier, is a block diagram representing the relationships between the main elements that comprise the consumer behavior and ad campaign database system 13. The consumer behavior and ad campaign database system 13 is served by a computer that is linked on a network to the computers serving the promotional websites 12, the transaction tracking system 14, the overseer website 6, and the account management system 7. The consumer behavior and ad campaign database system 13 computer is comprised of a publisher database program 63, a merchant database program 64, a PASSword database program 65, a user database program 66, and an event tracking system 67.

The publisher database program 63 comprises a publisher account data unit that is in turn linked to the new account program 34, account management program 35, and the update/renew program 38, all contained within the overseer website computer 6.

The merchant database program 64 comprises a merchant account data unit 69 and an inventory data system 70. The merchant account data unit 69 is linked to the new account program 34, account management program 35, and the update/renew program 38, all contained within the overseer website computer 6. The inventory data system 70 is

comprised of the inventory database program 77, and the current (modified) data storage unit 78.

The PASSword database program 65 comprises the PASSword account data unit 71, and the image/picture database program 72. The PASSword account data unit 71 is linked to the new account program 34, account management program 35, and the update/renew program 38, all contained within the overseer website computer 6.

The user database program 66 comprises the user account data 73 and is linked to the new account program 34, account management program 35, and the update/renew program 38 all contained within the overseer website computer 6.

The event tracking system 67 is comprised of the event data storage unit 74, tracking system program 75, and an event backup data storage unit 76. The event tracking system is linked to the search program 36 and the monitoring program 37, both contained within the overseer website computer 6, and to the encryption program 82 of the transaction tracking system 14.

The Corporation monitors the consumer selections as recorded by the components of the consumer behavior and ad campaign database system 13 computer, the card transaction tracking system 14 computer, the overseer website server 6 computer, and the promotional website 12 server computers in order to produce market research reports containing psycho-demographic and geographic reports based on interaction with the consumer and consumer-shopping behavior.

The Corporation delivers market research packages to IMAGE merchant/advertisers, publisher/distributors and PASSword advertisers through the Internet server 6 using information gathered and processed within the consumer behavior and ad campaign database system 13.

FIG. 9, briefly discussed earlier, represents the relationships between the main elements that comprise the transaction tracking system 14. The transaction tracking system 14 is served by a computer that is linked on a network to the computers serving the promotional websites 12, the consumer behavior and ad campaign database system 13, the overseer website 6, and the account management system 7. The transaction tracking system

14 computer is comprised of a transaction data storage 79, a transaction database management program 80, a backup data unit 81, an encryption program 82, and a 2nd auxiliary data storage 83.

A transaction log including all the transactions validated, successfully or not, by the validation program 30 is kept by the transaction database management program 80. The transaction database management program 80 channels the information to data storage elements 81, 83 contained within the transaction tracking system 14. The flow of information within the transaction tracking system 14 is handled by the transaction database management program 80 and the encryption program 82, which ensures the integrity of the data stored within the system 14. Contingent on a positive verification of funds, the merchant 8 delivers goods and/or services to customer 4.

FIG. 10 is a simplified block diagram of an exemplary e-commerce proxy purchase system 100 according to an embodiment of the present invention. The proxy purchase 100 incorporates or otherwise contemplates the use of a network 101, which may include or otherwise comprise any type of local area network (LAN) or wide area network (WAN) as known to those skilled in the art. The network 101 may incorporate all or a substantive portion of the global network online system (the "Internet") and any intranets or extranets as desired. The present invention is illustrated using Internet principles, such as the concepts of global networks, web sites, web pages, URLs (Uniform Resource Locators), etc., although it is understood that the present invention is not limited to any particular type of network or network system.

Although not specifically shown, the present invention contemplates wireless communications at any point in the communication system, such as any type of wireless connection to the Internet. Wireless communications of all types are contemplated, such as the use of infrared, laser or microwave communications or the like. The present invention also contemplates the use of wireless devices, such as cellular phones, personal digital assistants (PDAs) or any other similar devices.

A plurality of user systems or user entities 103, individually labeled USER 1, user 2, user 3, etc., are coupled to the network 101 using any one of a plurality of connection means previously described, already known, or newly discovered. For example, each user entity

103 establishes a connection to the network 101 using any type of communication device or technology, such as any type of analog, digital or cable modem to a service provider or hosting entity. Each user entity 103 is associated with one or more corresponding users. Any user entity 103 may alternatively be coupled via a LAN or WAN gateway device (not shown) to the network 101, where the LAN/WAN may be implemented according to any standard communication topology, such as Ethernet or the like. Each user entity 103 includes appropriate operating system (OS) and application software for establishing communications on the network 101, such as Internet Explorer by MicroSoft, Netscape Navigator, AOL, etc. Such communication software typically includes browser or browsing capabilities for addressing a web site, such as via the Internet protocol (IP) or a URL or the like, and for retrieving, interpreting and displaying web pages or the like written in HyperText Markup Language (HTML), eXtensible Markup Language (XML) or the like. In this manner, the user entities 103 are able to communicate with other user entities 103 or to communicate with any other systems or services coupled to the network 101.

A plurality of vendors or merchants 105, individually labeled MERCHANT 1, MERCHANT, MERCHANT 3, etc., are also connected to the network 101 to enable any of the user entities 103 to browse and purchase goods or services. A user entity 103, such as USER 1, browses a web page or the like from a merchant 105, such as MERCHANT 1, to "surf", "browse" or otherwise shop the inventory of goods or services of the selected merchant. A predominant method of purchase is the use of a credit, debit or other type of charge card that is generally "universally" accepted by any and all of the merchants 105 doing business through the network 101 (such as VISA, MasterCard, American Express, etc.). The term "charge" as used herein incorporates the concepts of either credit or debit including credit or debit accounts and corresponding credit or debit cards. For example, a charge account refers to either a debit or credit account and a charge card refers to either a credit card or debit card. In this manner, the user must have a valid charge card supported by a corresponding bank or financial institution, and the user must submit necessary information (typically including card number and expiration date) to the selected merchant in order to purchase the selected goods or services from that merchant.

The use of an established charge account is problematic for many online users for several reasons. First, the user must have sufficient credit in order to obtain the charge

account and corresponding number in the first place. Many users, such as young people or the disenfranchised, have sufficient funds for purchasing from any of the merchants 105, yet lack the necessary credentials or credit for establishing a proper charge account. Second, many people, for various reasons, desire not to use charge accounts and are thus precluded from most online merchants or retailers. Third, the use of charge accounts and cards typically requires specific user identification, thereby reducing or otherwise eliminating anonymity. Many users may desire to remain anonymous while purchasing goods or services online.

A proxy system 107 is provided and coupled to the network 101 to serve as an intermediary to enable any of the user entities 103 to purchase goods or services from the merchants 105 regardless of whether the user entities have an established charge account. A user (consumer, customer or the like) associated with any user entity 103 submits cash or any appropriate currency to a receiving entity 109. As further described below, the receiving entity 109 may comprise or incorporate any one or more of a plurality of different entities or systems. In one embodiment, the receiving entity 109 includes a an automated dispensing unit (ADU) or vending machine or the like located at any private or public establishment as desired. The receiving entity 109 may also comprise a person, such as a cashier or clerk or the like, at any private or public physical establishment or brick and mortar location, such as a bank, post office, train station, airport, etc., or any type of club, bar, restaurant or store, such as a convenience store, grocery market, department store, convenience store, etc. In return for the cash or currency, the user receives a unique serial number that may be used to establish one or more accounts with the proxy system 107. Each account established with the proxy system 107 is referred to as a "debit" or "cash" account since it may be initiated and funded using cash or the like, including currency, checks, money orders, etc. Also, once established, the account is used like cash or like a debit account for purchasing goods or services from any of the merchants 105.

The receiving entity 109 is affiliated with or otherwise serves as an agent for the proxy system 107. The receiving entity 109 receives or otherwise stores information used to generate or forward the serial number, and provides the currency or cash received from users to the proxy system 107 or an agent thereof, such as a bank or other financial institution 161 affiliated with the proxy system 107. In one embodiment, for example, an account is opened

at the bank 161 for receiving cash, currency or funds on behalf of the proxy system 107. It is noted that many variations are possible and contemplated. The bank 161 may represent a plurality of different branch offices of one bank or even a multiple number of different banks used by the proxy system 107. In another embodiment, currency may be received directly by or directly at any branch of the bank 161 or the proxy system 107 so that intermediate receiving entities 109 are not necessary. The receiving entity 109, however, provides an additional level of convenience and represents a network of individual receiving entities widely distributed within any desired geographic area or even the entire world, where each receiving entity 109 forwards cash received to any bank 161 or any other financial institution authorized by the proxy system 107.

The proxy system 107 provides serial number information to each receiving entity 109, and the cash received from users is forwarded to the bank 161. In one embodiment, the serial number is imprinted on a card 111 or the like for convenient access by the user, where the card 111 is sold to the user in exchange for the cash or currency. In another embodiment, a valid serial number is imprinted onto the card 111 upon purchase by the user via the receiving entity 109. As described further below, the receiving entity 109 includes a validation unit or the like for validating the card 111 upon purchase by generating and printing a valid serial number on the face of the card 111. A particular embodiment of the receiving entity 109 is an automated dispensing unit (ADU), further described below, configured to receive cash from a user, where the ADU further includes a validation unit, further described below, which creates and imprints the serial number on the card 111 for use by the user. In another embodiment, the receiving entity 109 includes a cashier or clerk, a supply of unvalidated cards and a validation unit, where the clerk inserts the card into the validation unit, which creates and prints the serial number onto the card 111 upon purchase of the card by a user.

In yet another embodiment, the serial number is provided to the user via any type of communication means, such as to the user's computer via the Internet, or to the user's communication device of choice. The serial number could be transmitted to a user's cell phone or PDA device, either via a wired or wireless connection. For example, the serial number may be transmitted by infrared (IR) communications to cell phone or PDA or the like.

In any event, the user receives a serial number in exchange for cash or currency, where the cash is ultimately forwarded to the proxy system 107 or deposited into a bank account established on behalf of the proxy system 107. The currency or cash may be collected periodically or immediately forwarded to the bank 161 upon receipt.

The proxy system 107 incorporates any necessary hardware and software for establishing an online presence on the network 101 for creating and managing cash accounts for the user entities 103 and for facilitating goods and services purchasing transactions as described herein. In one embodiment, the proxy system 107 includes one or more server computers that collectively implement a communication system 113, a processor system 115 and a memory system 117. The communication system 113 manages connection to the network 101 for establishing and maintaining communications with any of the user entities 103 and the merchants 105. The processor system 115 incorporates one or more microprocessors or the like for accessing and executing software programs and code to perform the functions of the proxy system 107. The memory system 117 includes any type of memory devices, such as read-only memory (ROM) or random access memory (RAM) or the like, for storing software programs for execution by the processor system 115 and for temporary storage of data and parameters utilized and processed by the processor system 115. The proxy system 107 may further incorporate a storage system 119 including one or more storage devices or the like, such as disk drives, tape drives, etc., for permanent storage of software programs and data as known to those skilled in the art. For example, the storage system 119 is used to store software programs and databases associated with the user entities 103 and merchants 105 as necessary, and, further, to store web page format information for the proxy system 107 to facilitate communication interfaces.

The serial number is submitted to the proxy system 107 via a user entity 103 and the network 101 to establish a cash account with the proxy system 107. For example, USER 1 receives a valid serial number on the card 111, and USER 1 then accesses a web page provided by the proxy system 107 via the network 101 using a known URL, which may also be printed on the card 111. A user connection 121 is established with the communication system 113 provided at the proxy system 107. If USER 1 is a new user, then the proxy system 107 invokes an account manager 123 that assists USER 1 in establishing a new account using the serial number. The account manager 123 prompts for and receives the

serial number from USER 1 and determines whether the serial number is valid. If the serial number is valid, the account manager 123 establishes a cash account 125 for USER 1. The USER 1 account 125 incorporates sufficient data to facilitate online purchases via the network 101. In one embodiment, the account manager 123 creates and supplies a user identifier (user ID) 127 and a corresponding password 129 and provides this user identification information back to USER 1 to facilitate access to the USER 1 account 125. In another embodiment, the account manager 123 prompts for the user ID 127 and the password 129, which is supplied by USER 1, where the user identification information is then stored within the USER 1 account 125.

In one embodiment, the serial number provided on the card 111 incorporates, encodes or otherwise encrypts a cash amount or value corresponding to the amount of cash or currency provided to the receiving entity 109. The cash amount is stored within the USER 1 account 125 as an account balance 131. As described further below, the account manager 123 deducts a total purchase amount from the account balance 131 for each purchase transaction conducted by USER 1. In this manner, the remaining cash or funds available to any user entity 103 with a valid account are always maintained by the proxy system 107.

Each cash account maintained by the proxy system 107 may further incorporate other types of information, such as default information 133. The default information 133 may include, for example, a default shipping address for shipping goods and services purchased online. The shipping address may be the address of the user or any address selected by the user, such as a P.O. box. A P.O. box may enable anonymity for the user if desired. The default information 133 may include other information, such as preferences associated with use of the proxy system 107, or other preferences. Once the USER 1 account 125 is established, USER 1 may log in to the proxy system 107 using the appropriate user ID 127 and password 129 and access the USER 1 account 125 for purposes of account management as further described below.

The card 111 may comprise any type of configuration, such as a credit card, debit card, phone card, smart card or any other standard or convenient size for fitting within a standard wallet or the like, where such cards are typically made of plastic, paper or cardboard or any other suitable material. It is noted, however, that once the serial number is submitted to the account manager 123 and a corresponding user account is activated corresponding to

the original serial number, then the original serial number is no longer valid. Subsequent attempts to establish another account using the same serial number are detected by the account manager 123 and rejected. The card 111 is effectively useless once a user entity 103 has activated an account with the proxy system 107 using the serial number imprinted on the card 111. In this manner, an additional level of security is provided so that a user entity 103 does not lose funds once activating an account with the proxy system 107 using the serial number. Once a cash account is activated, the user entity 103 accesses the corresponding account using the corresponding user ID and password associated with the activated account. For this reason, it is noted that the particular card is not necessary and the serial number may be conveyed to a user in any desired manner or format. The card 111 simply provides a convenient format and medium of exchange for enabling convenient transport of the serial number for subsequent activation of a cash account with the proxy system 107.

A card embodiment also provides a convenient and powerful advertising mechanism for vendors and merchants. Advertising information by any merchant or vendor may be printed on the face of the card. The card serves as an advertising vehicle when displayed at an ADU and after purchase while being carried by a user. Such advertising may serve strategic purposes, where the advertising agent of a purchased card may receive an incentive or other compensation. Tracking particular purchased cards with the associated advertisers may also serve other strategic purposes.

A particular advantage provided by the proxy system 107 is that the user may remain entirely anonymous even after establishing a cash account with the proxy system 107. The user interacts with the receiving entity 109 on a cash and anonymous basis and receives a corresponding serial number. The serial number has no identity or other information specific to the user. The account manager 123 establishes an account for any valid serial number and either provides or prompts for a user ID and the corresponding password may be defined by the user and may be arbitrary as long as any predetermined specifications or requirements are followed as previously described.

Once a cash account has been activated for a user, the user logs into the associated cash account and may then request to perform online transactions. In response, the proxy system 107 invokes a transaction block 135 for purchasing goods and/or services from any of the merchants 105. In a particular embodiment, a user entity 103 accesses a welcome web

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A P.O. box may enable anonymity for the user if desired. The
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using any one of a variety of methods. A frame incorporating the buy button 145 may be sent to USER 1 from the proxy system 107 for display. Alternatively, the buy button 145 may be displayed in a separate browser window after login.

The transaction block 135 intercepts selection of the buy button 145, indicating the desire to purchase the items listed on the purchase page 141. In one embodiment, USER 1 need not fill in all of the otherwise necessary details of the purchase page 141 that are usually required by the selected merchant 105, such as MERCHANT 2. In particular, the purchase page 141 typically requires name, address and other required or optional information and further requires the user to submit a valid charge card number and corresponding expiration date. Instead, USER 1 simply selects the buy button 145. Alternatively, a key word, such as the word "buy" or the like, is typed into any predetermined field within the purchase page 141, such as the field normally reserved for a charge card number, and, upon selection of the buy button 145, the transaction block 135 scans and detects the key word.

The transaction block 135, after detecting selection of the buy button 145 and/or corresponding key word, retrieves the total purchase amount 143 from the purchase page 141. The transaction block 135 queries the account manager 123 to access the USER 1 cash account 125 to determine whether the balance 131 indicates sufficient funds to cover the total purchase amount 143. For example, the transaction block 135 submits the total purchase amount 143 to the account manager 123, which compares the total purchase amount 143 with the account balance 131 to determine whether sufficient funds are available. If sufficient funds are not available such as, for example, if the total purchase amount 143 exceeds the account balance 131, then the account manager 123 informs the transaction block 135, which rejects the sale or purchase. The transaction block 135 informs USER 1 that the purchase is rejected for lack of sufficient funds. On the other hand, if the account balance 131 indicates that sufficient funds are available, then the transaction block 135 informs the account manager 123 that the sale is to be completed. The account manager 123 deducts the total purchase amount 143 from the account balance 131, resulting in a new account balance 131 available to USER 1.

The transaction block 135 further populates the purchase page 141 with the appropriate required information to complete the sale requested by USER 1. In particular, the transaction block 135 accesses a pre-existing charge account 147 of the proxy system 107,

which includes any and all requisite information for conducting online purchases, such as a charge number 148 and an expiration date 149. The charge account 147 is a pre-established charge account sponsored by an appropriate financial institution or bank 163, where the charge account 147 is universally accepted such as by any of the merchants 105. In this manner, the purchase page 141 is populated with valid charge account information of the proxy system 107 for completing the desired sale for USER 1 with an active cash account with sufficient funds. The transaction block 135 may also populate the purchase page 141 with other information, such as a shipping address, which would otherwise be required for shipment of goods to USER 1. The transaction block 135 may query or prompt USER 1 for an alternative shipping address other than the default shipping address if previously provided. In this manner, USER 1 may use the default shipping address previously supplied or may provide a new shipping address for the particular purchase.

Once the purchase page 141 is populated with valid charge account information from the charge account 147, the transaction block 135 transmits a populated purchase page 142 to the selected merchant 105, such as MERCHANT 2, which receives and verifies the populated purchase page 142. Since the proxy system 107 populates the purchase page 142 with valid charge information, MERCHANT 2 accepts the populated purchase page 142 and completes the sale. It is noted that MERCHANT 2 is isolated from the particular user entity USER 1 interested in the purchase since MERCHANT 2 is effectively transacting the purchase with the proxy system 107. Once the purchase is approved by MERCHANT 2, such as MERCHANT 2, that merchant may optionally submit a confirmation page 151 addressed to the proxy system 107 via the network 101. The transaction block 135 intercepts the confirmation page 151 and forwards a corresponding proxy confirmation page 153 to the user entity 103 via the user connection 115. Although the confirmation page 151 may optionally be forwarded to USER 1, it may contain specific charge account information of the charge account 147 of the proxy system 107. Thus, it may not be desired to provide such information to USER 1 or any other user entity 103. In one embodiment, the transaction block 135 scans the confirmation page 151 and strips out or otherwise masks specific charge account information of the proxy system 107 and forwards a modified version of the confirmation page 151 in the form of the proxy confirmation page 153 back to the user entity 103. In this manner, a user entity 103 effectively receives a confirmation page from the selected merchant 105 without the specific account information of the charge account 147.

It is noted that the systems established by the merchants 105 need not be modified and effectively operate in the same manner as currently operated. The proxy system 107 simply acts as an intermediary or proxy for any of the user entities 103 which have established a cash account with the proxy system 107 as previously described. In one embodiment, the particular configuration of the systems utilized by the user entities 103 may also be used to transmit online business via the proxy system 107 without modification. In this embodiment, the transaction block 135 frames web pages from the network 101 within a proxy system frame and forwards the proxy system frame to the user entity 103. The user views the outer frame supplied by the proxy system 107 for controlling online purchases.

In another embodiment, a virtual advisor program 155 is loaded onto the user entity 103 to interact with the proxy system 107 as desired. The virtual advisor program 155 may be implemented as software provided to the user entity 103 or may otherwise be software downloaded to a user entity 103 via the network 101 and installed on the user entity 103. In one embodiment, the virtual advisor program 155 is added to a browser program as a routine or plug-in that is readily available to the user from a tool menu or task bar on the browser. The virtual advisor program 155 operates in conjunction with the transaction block 135 to provide similar functions previously described. One benefit of the virtual advisor program 155, however, is that the user entity 103 need not remember or store the URL or address of any of the merchants 105, as this function is handled by the virtual advisor program 155. The virtual advisor program 155 monitors the browsing function and detects selection by a user entity 103 for a purchase of goods or services of any of the merchants 105. Upon detection of a desired purchase, such as selection of the buy button 145, the virtual advisor program 155 establishes a connection with the proxy system 107 and forwards the purchase page 141 to the transaction block 135. The transaction block 135 performs the accounting functions to verify sufficient funds, populates the purchase page 141 with the necessary purchase information, such as the charge number 148 and the expiration date 149, and submits the populated purchase page 142 to the selected merchant 105. Alternatively, the transaction block 135 performs the account functions and provides the necessary purchase information to the virtual advisor program 155. The virtual advisor program 155 populates the purchase page 141 and forwards the populated purchase page 142 to the selected merchant 105. In either of these embodiments, the particular transactions occurring between the user entity 103, the proxy system 107, and the selected merchant 105 is effectively transparent to the

user entity 103. During the transaction, or soon thereafter, the selected merchant 105, or a chosen agent thereof, uses the charge number 148 and/or any other information of the charge account 147 to contact the financial institution issuing the charge account 147, such as the bank 163, to pre-approve the transaction. The merchant 105 or its agent then submits an invoice or other request for funds from the bank 163 in standard fashion. The bank 163 ultimately contacts the bank 161 to retrieve the requisite funds of the transaction. The proxy system 107, in one embodiment, generates a report of all transactions conducted by the transaction block 135 and forwards the report to either or both of the banks 161, 163. Alternatively, either or both banks 161, 163 generates reports that are forwarded to the proxy system 107. The proxy system 107 may then reconcile the bank reports with data at the proxy system 107 for accounting purposes or to otherwise identify software or database discrepancies. Such reporting may also be used to identify and prevent fraudulent use of the system.

A single financial entity 162 replacing or otherwise affiliated with the banks 161, 163 may streamline the entire transaction process. For example, the single financial entity 162 may also comprise a single bank that receives all funds from the receiving entity 109 and also sponsors the charge account 147 for the proxy system 107. The entity 162 has access to the cash account for the proxy system 107 to ensure sufficient funds for any particular transaction.

Once the purchase or sale has been completed, the selected merchant 105 utilizes the shipping address to ship the goods or services to the selected shipping address of the user entity 103, such as USER 1. In effect, the proxy system 107 receives sufficient funds up front via the receiving entity 109 and maintains a debit account for completing purchases via any of the merchants 105 through the network 101. The credit or debit amount is then deducted from the pre-funded account, where the funds are ultimately forwarded to the appropriate merchant.

The proxy system 107 may incorporate many or all of the functions of the Prepaid Card Based Internet and Merchandiser Sales and Advertising System previously described. However, use of a pre-established charge account by the proxy system 107 to conduct online transactions reduces or eliminates many functions. The sale of pre-paid cash cards in exchange for a valid serial number may be similar, although ADUs or vending machines with

validation units, described below, are also contemplated. Establishing a cash account and online account management functions are similar. A user uses a serial number to activate one or more accounts, and may further merge accounts, split accounts, create subaccounts, request disbursements of funds from one or more accounts, etc. in a similar manner.

The proxy system 107 eliminates any need for any merchants 105 to honor any particular card, such as the card previously described. The charge account 147 is based on any one of several universally accepted credit or debit cards, such as Visa, MasterCard, American Express, Discover, etc. For this reason, the user entities 103 are not limited to any particular merchants on the network 101 of the Internet. The proxy system 107 may establish several universally accepted charge accounts so that virtually any online merchant is accessible. There is no need for any of the merchants to become members to enable transactions to occur, although merchant membership is not precluded and may still be beneficial for other reasons. Thus, merchants do not have to become members and do not have to maintain any accounts with the proxy system 107. A selected merchant, therefore, does not have to verify the availability of funds in the user's cash account at the proxy system 107 as the proxy system 107 handles fund verification functions. The merchant need only verify the charge account 147, which is essentially identical to any charge account pre-approval performed daily for any online customer purchasing using a universal charge card.

FIG. 11 is a more detailed diagram of an exemplary embodiment of the proxy system 107. A user entity 203 is shown which represents any of the user entities 103 coupled to the network 101. A serial number issuing system 205 is also shown which receives currency from the user entity 203 and provides a corresponding serial number in a similar manner as previously described with respect to the receiving entity 109. The serial number issuing system 205 may incorporate the receiving entity 109 or any other suitable system used to receive currency and provide valid serial numbers. The user entity 203 is shown coupled to the proxy system 107, which is typically across a network such as the network 101.

The proxy system 107 includes a user interface 209, an account activation system 211, an account management system 213 and a transaction system 214. The user entity 203 initially interfaces a welcome program script 215 within the user interface 209 when accessing the proxy system 107. If the user entity 203 has previously established an account, the user interface 209 transfers the user entity 203 to a login script 217. Upon successful

login via the login script 217, the user interface 209 transfers the user entity 203 to an account management program 219, which accesses the account management system 213 to perform account management functions as previously described for the account manager 123. For example, the user entity 203 may split or consolidate accounts, create subaccounts, add funds to one or more accounts, review transaction reports, etc. Once the user entity 203 is appropriately logged on, the user entity 203 may request activation of a transactions program 221 to conduct online transactions. The transactions program 221 cooperates with the transaction system 214 to perform the functions of the transaction block 135 as previously described.

If the user entity 203 indicates the desire to establish a new account, the user interface 209 transfers the user entity 203 to a new account program 223, which accesses the account activation system 211. The account activation system 211 includes a serial number verification system 225, which prompts the user entity 203 for the serial number received from the serial number issuing system 205. The user entity 203 provides the serial number to the serial number verification system 225, which verifies whether the serial number is valid. If the serial number received from the user entity 203 is not valid, then the serial number verification system 225 submits an error message 227 back to the user entity 203 indicating an invalid serial number. If an invalid serial number is received, then the serial number verification system 225 does not allow the user entity 203 to create a new account. The user entity 203 is allowed to access the account management program 219 or the account management system 213 only after establishing at least one valid cash account.

If the serial number verification system 225 detects a valid serial number from the user entity 203, then the account activation system 211 transfers the serial number to a serial number decoding system 229, which extracts any encoded or encrypted information. For example, the serial number decoding system 229 extracts time and date data, sponsor data, location data or any other information incorporated within the serial number. In one embodiment, some of the data retrieved from the serial number, such as location information (demographic information and/or zip code), sponsor information (marketing information), and temporal information (time, date) is stored for creation of market research reports.

It is noted that for security purposes the information encoded within the serial number may not be easily or readily decodable. For example, the information may be encrypted into

the serial number and retrieved by an appropriate decryption algorithm. The serial number decoding system 229 also decodes and transfers a monetary value data to a debit card management system 231. The debit card management system 231 incorporates valid charge account information, such as a valid charge card number and a valid charge card expiration date, which is used to perform transactions on behalf of the user entity 203. Operation within the account activation system 211 is transferred to a create user ID program 233, which interacts with the user entity 203 to establish a valid user ID and password as previously described with respect to the account manager 123.

The account activation system 211 interfaces the account management system 213 to store the new account information. The account management system 213 includes a database management program 235, which transfers the information from the create user ID program 233 and the debit card management system 231 to an account data storage 237. It is noted that the information may be transferred through a data encryption program 239 for security purposes for storing encrypted data to protect users of the proxy system 107. The account data storage 237 may further be interfaced to one or more auxiliary data storage(s) 241 for storing the corresponding data for a plurality of users as needed. An exemplary cash account 243 corresponding to the user entity 203 is shown within the account data storage 237. The cash account 243 associated with the user entity 203 incorporates the user ID, the password, the account balance, and any other default information as previously described with respect to the USER 1 account 125. The account balance is initially set to the monetary value data retrieved from the serial number provided by the user entity 203. Once the user entity 203 has a valid cash account 243, the user entity 203 may log in via the log in script 217 and interface with the account management program 219, which accesses the cash account 243. The user entity 203 may also interface the transactions program 221 to activate and conduct online purchases.

The transaction program 221 interfaces and controls the transaction system 214 to enable online purchases. The transaction system 214 includes a navigation and framing block 251 that enables the user entity 203 to navigate a network such as the network 101 via the proxy system 107. As previously described, in one embodiment the user entity 203 maintains a session with the proxy system 107, which maintains a separate connection with the network 101 to browse other entities, such as any of the merchants 105. The navigation and framing

block 251 interfaces with the user entity 203 by retrieving navigation functions and commands from the user entity 203 and performing the navigation via the network 101, where web pages retrieved from the network 101 are forwarded back to the user entity 203. The navigation and framing block 251 may formulate a frame associated with the proxy system 107 around each page to assist the user entity 203 in browsing functions. An exemplary framed transaction page 1300 is shown in FIG. 22. The frame further assists the user entity 203 in purchasing from any of the merchants 105. As described previously, in another embodiment, the navigation and framing functions performed by the navigation and framing block 251 may be performed by a virtual advisor program 155 that is installed on and executed by the user entity 203.

The navigation and framing block 251 is coupled to a tracking block 253 that monitors the navigation of the user entity 203. The tracking block 253 also notes purchasing decisions by the user entity 203 and stores the information into an appropriate memory. Such tracking information may be utilized for subsequent promotions and advertising campaigns since it contains specific purchasing characteristics of any particular user.

The transaction system 214 further includes a search block 255 that enables the user entity 203 to search for specific products or services based on any one or more of several criteria. The criteria may include price, merchant or service provider description or key words, product or service description or key words, industry-related terms, etc. Further, the user entity 203 via the search block 255 may search for the lowest price available for specific items or services from multiple merchant sites.

The transaction system 214 further includes a purchase block 257, which incorporates the necessary transaction functions to enable the user entity 203 to purchase items online using one or more cash accounts, such as the cash account 243. The purchase block 257 includes an authorize purchase block 259, which interfaces the account management system 213 to authorize a particular purchase by the user entity 203. In particular, after the user entity 203 has browsed and selected goods or services from a merchant for purchase, the user entity 203 indicates the desire to purchase the selected goods or services. The authorized purchase block 259 compares the total purchase price with the available balance of the corresponding cash account, such as the cash account 243, to determine whether to authorize the purchase. The purchase block 257 further includes a purchase page population and

transmit block 261 which interfaces with the web site of a merchant to populate a purchase page and to transmit a populated purchase page, such as the populated purchase page 142, to the selected merchant. The purchase page population and transmit block 261 cooperates with the debit card management system 231 to supply a corresponding debit card number and debit card expiration date and any other necessary information to appropriately populate a purchase page to complete the transaction.

The purchase block 257 further includes a confirmation page block 263 to facilitate completing a transaction with the user entity 203. The confirmation page block 263 may perform confirmation in any one of several different manners. In one embodiment, the confirmation page block 263 receives a confirmation page from a selected merchant, such as the confirmation page 151, masks any information specific to the proxy system 107, and forwards the masked confirmation page to the user entity 203. For example, the particular debit card information utilized by the proxy system 107 to complete the transaction may be masked so as not to be retrievable by the user entity 203. In an alternative embodiment, the proxy system 107 forwards a proxy confirmation page with a predetermined format associated with the proxy system 107, such as the proxy confirmation page 153.

FIG. 12 is a simplified block diagram of an exemplary automated dispensing unit (ADU) 300 utilized for dispensing prepaid cash cards supplied with serial numbers used according to the present invention. The ADU 300 is similar in function and configuration as a vending machine or any type of currency accepting unit. In the embodiment shown, the ADU 300 includes a card display 301, which is commonly used in known vending machines such as stamp machines, candy machines, phone card machines, etc. For example, the card display 301 includes three display windows 303, 305, and 307 for displaying three separate cash cards 304, 306, and 308, respectively. Of course, any number of cash cards less than or greater than three may be displayed as desired. The cash cards 304, 306, and 308 displayed may be preprinted with sponsor information and may further include advertisements as desired. Preprinted or programmable labels X, Y, and Z associated with the display windows 303, 305, and 307, respectively, may also be provided within the card display 301 to provide further information of the corresponding cash cards. For example, the labels X, Y, and Z may define a desired cash value associated with the corresponding adjacent cash cards. In one embodiment, the labels X, Y, and Z may define certain predetermined cash card amounts

such as $10, $20, $50, $100, etc., where a user is provided with the corresponding cash card once the appropriate amount of money is provided and the corresponding cash card is selected.

A selection unit 309 is also provided on the ADU 300 and may include selection buttons 311 such as according to those commonly used for vending machines. In the embodiment shown, three selection buttons 311 individually labeled X, Y, and Z correspond to selection of the cash cards 304, 306 and 308, respectively. Of course, any number of selection buttons 311 may be provided, or any other type of alternative selection mechanism may be used, such as cross-reference, alpha-numeric buttons commonly used in stamp machines.

The ADU 300 further includes a currency accepting unit 313 with a corresponding slot 314 for accepting standard-sized paper currency in denominations of $1, $5, $10, $20, $50, etc. as commonly used for United States currency. Any type of valid domestic and/or foreign currency is contemplated depending upon location or geographic region. An optical reader 315 detects paper bills inserted into the slot 314 of the currency accepting unit 313 to verify valid currency and to identify the denomination amount on each bill. An optional coin slot 317 may be provided with a corresponding coin detector 319. The ADU 300 may further include a processor 321 coupled to the optical read 315 and coin detector 319 for determining the total amount of money inserted in the ADU 300. An optional display unit 323 coupled to the processor 321 may be provided for displaying information. For example, the display 323 may comprise a simple Light Emitting Diode (LED) display for displaying the amount of money that has been received by the ADU 300 via the currency accepting unit 314 and/or the coin slot 317. The display 323 may be used to convey any other type of information as may be desired.

The ADU 300 further includes an internal card supply 325 for holding preloaded cash cards within the ADU 300 for dispensing to the user. In a first embodiment, the cash cards loaded within the card supply 325 of the ADU 300 are prevalidated with valid serial numbers. The user simply inserts the appropriate amount of money into the ADU 300 as detected by the processor 321 and makes a selection via the selection unit 309. If the appropriate amount of currency is received, the processor 321 activates the card supply 325 and a card dispensing unit 327 to dispense the appropriate and selected card via a dispensing slot 329. The serial

number may incorporate information identifying a valid serial number and may further incorporate the corresponding monetary value of the cash card, such as $20, $50, etc. The cash card may further be sponsored by a merchant or advertiser, where the serial number may further incorporate card advertiser sponsor information, card bank sponsor information, a lot number, or any other information that may be desired. A significant problem with prevalidated cards is a lower level of security such that a significant amount of funds may be stolen by breaking into the ADU 300. Any prevalidated cash cards retrieved by a thief from the ADU 300 may then be utilized to establish a valid cash account with the proxy system 107 and retrieve online goods and services using the preprinted serial number as previously described. It is noted, however, that if the theft is detected in time it is possible to track the stolen cards via the corresponding serial numbers and deactivate those serial numbers.

In another embodiment, the cash cards in the card supply 325 are not validated. The unvalidated cash cards optionally include a magnetic strip that stores at least a portion of a valid serial number associated with that particular card. The serial number on the magnetic strip may include any desired information, such as card advertiser sponsor information, card bank sponsor information, lot number, etc. associated with that particular card for purposes of tracking information. The serial number may optionally include a monetary value if it is desired to dispense cash cards with predetermined monetary values. However, it may be desired not to incorporate the monetary value into the magnetic strip. Rather, a programmable monetary value is incorporated into the completed serial number. In any event, the serial number on the magnetic strip of the unvalidated card is incomplete and therefore not valid and may not be used to establish a cash account and conduct online purchases. Unvalidated cash cards provide an increased level of security for use with the ADU 300.

The processor 321 is further coupled to a memory 331 which may be implemented as random access memory (RAM), read only memory (ROM), or any combination thereof for storing certain types of information associated with the ADU 300. For example, the memory 331 may store location information (LOC) 338, identifying the location of the ADU 300. The memory 331 may further store maintenance or service information such as an ID number and password associated with a maintenance or service personnel responsible for the ADU 300. An optional communication port 333 is provided to enable external communications

and control of the ADU 300. For example, the communication port 333 may be used by the appropriate maintenance or service person with corresponding ID and password to program or reprogram the memory 331 and processor 321 as desired. The memory 331 may further incorporate encryption code 337 executable by the processor 321 for performing encoding and/or encryption functions further described below. The encryption code 337 executed by the processor 321 operates as an encryption device for encoding information into the serial number. Of course, a separate encryption or encoding device may be used instead. The processor 321 may further be coupled to a clock/timer unit 335 for retrieving time and date information (temporal information) as desired.

In one embodiment, the processor 321 detects the amount of money received by the ADU 300 and optionally displays the amount via the display device 323. The processor 321 detects selection via the selection unit 309 of a cash card, such as any of the cash cards 304, 306, or 308, and communicates to the card supply 325 and the card dispensing unit 327 to dispense an appropriate cash card via the dispense slot 329. In this embodiment, the dispensed cash card is still unvalidated. The user is then instructed to insert the dispensed cash card into a slot 340 of a magnetic (MAG) reader and printer device 339 coupled to the processor 321. The MAG reader and printer device 339 reads the partial serial number from the magnetic strip on the cash card. The processor 321 retrieves the serial number and activates the encryption program 337 to complete the serial number. For example, the location information 338, maintenance information, time and date information, as well as the cash amount received, may be incorporated by the encryption code 337 to generate a complete and valid serial number. Once the encryption code 337 creates a valid serial number, the processor 321 controls the MAG reader and printer device 339 to print the valid serial number onto the card to validate the card. For additional security purposes, the serial number may be generated utilizing any appropriate type of encryption algorithms, and may further be based on codes the change with time to prevent or otherwise substantially reduce the possibility of fraudulently created serial numbers. The validated card is then dispensed from the slot 340 and thus provided to the purchasing user.

It is noted that even if a cash card is intended to have a specific monetary value, the processor 321, via the encryption code 337, may be used to incorporate only the monetary value into the serial number that has been actually received by the ADU 300 regardless of the

face value of the card. In this manner, a card with a face value of $50 may actually incorporate any monetary value more or less than $50 corresponding to the exact amount received at the ADU 300 provided by the user. Alternatively, the user may be forced to insert at least the amount of money of the face value of a selected card to receive that card.

In an alternative embodiment, an internal MAG reader 341 and printer 343 are coupled to the processor 321. The printer 343 is further coupled to the card dispensing unit 327. In this embodiment, after selection via the selection unit 309, the card supply 325 provides a selected card to the MAG reader 341, which reads the partial serial number from the MAG strip of the card. The partial serial number is provided to the processor 321, which executes the encryption code 337 to generate an encrypted and valid serial number as previously described. The processor 321 communicates with the printer 343, which receives the cash card from the MAG reader 341 and prints the valid serial number onto the face of the card. The printer 343 cooperates with the card dispensing unit 327 to dispense the validated card via the dispensing slot 329. In this manner, after the user has selected the appropriate card, the validation process is performed internal to the ADU 300 so that a validated card is dispensed only once, requiring no further action by the user.

It is noted that the processor 321, the memory 331 and the MAG reader and printer device 339 (or the MAG reader 341 and the printer 343) collectively comprise a validation unit used to validate cash cards to be dispensed to the user. In an alternative embodiment, a separate validation unit may be provided and used by a clerk or cashier at a store. The validation unit includes a slot for receiving an unvalidated cash card, which is stamped with a valid serial number to validate the card. The validation unit may or may not be coupled to a cash register to verify funds. The clerk receives cash from a user, selects an unvalidated card and inserts into the stand-alone validation unit. The validation unit stamps the card with a valid serial number, and the clerk retrieves the card and hands to the user. The validation unit may include a numeric input device or the like to enable the clerk to input data to be incorporated into the serial number. For example, the cash amount received from the user may be entered by the clerk, where the validation unit incorporates the value of the card into the serial number.

FIG. 13 is a simplified block diagram of another ADU 400 implemented according to an alternative embodiment. The ADU 400 is very similar to the ADU 300 and includes

similar components and functionality. In addition, the ADU 400 incorporates communication logic 401 for establishing an online communication connection 402 to an external network, such as the network 101, although any alternative and suitable network is contemplated. A wireless connection is contemplated for the ADU 400. The communication logic 401 enables remote control and programming of the ADU 400 such as by a remote server associated with the proxy system 107 or the like. The communication logic 401 may be coupled to the processor 321 and/or the memory 331 for purposes of programming these devices or upgrading software, etc. For example, a new version of the encryption code 337 may be downloaded and stored in the memory 331 via the communication logic 401.

In a further embodiment, the ADU 400 may include a live advertising display 403 coupled to the communication logic 401. The live advertising display 403 may include any type of display apparatus such as a cathode ray tube (CRT) or LED display or the like for displaying live advertising. The advertising information may be supplied remotely by a network via the communication logic 401 and thus may be updated remotely from time to time. The live advertising display 403 may alternatively, or in addition, include memory for storing live advertising display information, where such information may be updated from time to time. The advertising information may be delivered in response to data or card dispensing activity by a user.

The cash card dispensing operations performed by the ADU 400 may be similar or identical as those performed by the ADU 300 previously described. However, the remote communication capability provided by the communication logic 401 allows for further capabilities. The ADUs 300 or 400 must be serviced from time to time to retrieve the cash received at the unit. Such service may be performed on a periodic basis such as daily, weekly, bi-monthly, monthly, etc. or any other desirable service period. It is possible to detect that an independent ADU 300 is low on cash cards and loaded with a significant amount of currency if a significant number of cash accounts are activated using serial numbers dispensed by the ADU 300. Recall that each serial number may incorporate location information and may even incorporate specific ADU identification information. However, there is no guarantee that a user will activate a dispensed card within a certain period of time, so there may not be a way to tell that a given ADU 300 is out of cash cards. The communication logic 401 enables periodic communications, such as every hour or every

day, to track the vending operations of the ADU 400. For example, reporting logic 405 may be provided to monitor the card supply 325 and/or the processor 321 to determine the status of the ADU 400 and convey the status to a remote manager via the communication logic 401. Such reporting may be conducted periodically, on an interrupt basis, or via polling by the remote system for determining the status of the ADU 400. In this manner, if the ADU 400 is low on cards, as reported by the reporting logic 405, it may be serviced at that time. The reporting logic 405 may also be used to transmit dispensed serial numbers for tracking purposes and verification. This provides an additional security mechanism to identify fraudulently created serial numbers if not matching actual dispensed information.

FIG. 14A is a front view of an exemplary cash card 500 which may be used as any of the cash cards, such as 111, 304, 306, 308, as previously described. The cash card 500 may be made as the same size and shape as a standard debit or credit card or any other similar wallet-sized card. The cash card 500 includes a front face 503 available for printing any type of advertisement by a sponsor of the particular cash card. The front surface 503 may further include a value designator 501 which is shown as specifying "20 units". The units denote any type of currency, depending upon the jurisdiction or geographic use of the cash card 500. For example, in the United States, a value designation 501 of 20 units may denote 20 U.S. dollars.

FIG. 14B is the back side of the cash card 500. The back side of the cash card 500 includes a magnetic strip 505 for imprinting any type of information associated with the cash card 500, such as a partial serial number, card advertising sponsor information, card bank sponsor information, lot number, monetary value, etc. The back side of the cash card 500 may also include a printable segment 507 for printing a serial number 509 as previously described. The printable segment 507 may further include other information, such as a lot number 511, personal identification number (PIN) 513, or any other printed information as desired. The back side of the cash card 500 may further include instructional text 515, such as instructions for activating the cash card 500 via an Internet connection or touch tone telephone activation, etc.

FIG. 15 is a screen shot of an exemplary welcome web page 600 that may be used as the initial web page when a user visits a web site associated with the proxy system 107. The welcome program script 215 may be programmed to send the welcome web page 600 to the

user entity 203. The welcome web page 600 may be written in HTML or XML or the like and includes hyperlink interactive buttons or selection text as is commonly used and displayed by standard browsers, such as the Internet Explorer by Microsoft or the Netscape Navigator by Netscape. The welcome web page 600 includes an information hyperlink 601 for enabling a user to link to information about the web site. The welcome web page 600 may include a new card activation link 603 that enables a user to establish a new cash account based on purchase of a cash card. The welcome web page 600 may further include a transaction link 605 that enables a user to invoke the transaction function of the proxy system 107 for shopping, surfing or otherwise browsing the network and for purchasing goods or services. The user interface 209 may intervene to direct the user to the login script 217 to verify that the user has at least one valid cash account. The welcome web page 600 may further include a rewards program link 607 that enables a user to link to promotional information associated with purchases using the proxy system 107. The welcome web page 600 may further include other types of links such as an information link 609 that enables a user to link to help information or a site map or the like.

FIG. 16 is a screen shot of an exemplary account activation page 700 that may be displayed upon selection of the new card activation link 603 of the welcome web page 600. The account activation page 700 may include a serial number field 701 for receiving the serial number purchased by the user, such as the serial number printed on a cash card. The account activation page 700 may further include a user name field 703a for enabling the user to enter any desired user name for establishing the associated cash account. In the embodiment shown, the user name comprises twelve (12) digits or alpha-numeric characters. A second and optional user name field 703b may be used for precautionary purposes in which the user re-enters the user name for verification. The account activation page 700 may further include a password field 707a for enabling the user to select and enter any desired password for logging onto and accessing the associated cash account. In the embodiment shown, the password comprises six (6) digits or alpha-numeric characters. A second password field 707b may be included for security purposes in which the user re-enters the same password submitted in the password field 707a to verify the password. The account activation page 700 further includes an ENTER button 709, which the user selects after filling out the required fields for creating the associated cash account.

FIG. 17 is a screen shot of an exemplary account information page 800 for providing account information to the user. The account information page 800 may display the user name 801 and the corresponding password 803, although the password 803 may be displayed in masked form for purposes of security. The account information page 800 may further include a balance amount graphic 805 indicating the total remaining funds in the cash account. The account information page 800 may further include an account recharge link 807 that enables the user to link to one or more pages for increasing the available balance or funds associated with the cash account. The account information page 800 may further include a transaction link 809 that enables the user to proceed to the transactions program and associated transaction pages for purchasing goods and services via a network.

FIG. 18 is a screen shot of an exemplary account recharge page 900 which may be displayed in response to selection of the account recharge link 807 of the account information page 800. The account recharge page 900 may include a cash link 901 for enabling a user to recharge the associated cash account using addition cash cards, by submitting cash or other currency types such as checks or money orders, or using other accounts types such as credit or bank accounts. Cash or currency is submitted to a receiving entity 109 or delivered to a representative of the proxy system 107 to enable recharging of the cash account. The cash link 901 may be used to link to associated pages denoting the status of cash received or an indication of a desire to submit cash to increase the balance of the cash account. It is noted, however, that the balance of the cash account is not increased until actual funds are received and/or verified. A similar check link 905 may be provided on the account recharge page 900 for enabling a user to link to pages for submitting a check to a receiving entity 109 for increasing the balance of the cash account. A similar money order link 909 may be provided on the account recharge page 900 for enabling the user to increase the balance in a similar manner as the cash link 901 or check link 905 except using money orders.

A bank account link 913 is selected to transfer to web pages that enable a user to increase the balance of a cash account by transferring funds from a valid and existing bank account. Such web pages prompt for a particular bank and bank account number and verify the available funds and authorization for transferring funds from the bank account to the selected cash account. The account recharge page 900 further enables the user to enter a credit card number via a credit card link 903 or a similar debit card number via a debit card

link 911 to enable a user to link to pages to increase the balance using a valid credit or debit card. The account recharge page 900 may further include a cash card link 907 that enables a user to link to pages to increase the balance of a cash account from one or more purchased cash cards. In this manner, a user can use a variety of methods to create new accounts or to increase the balance of existing accounts.

FIG. 19 is a screen shot of an exemplary cash card recharge page 1000 that may be displayed in response to selection of the cash card link 907 of the account recharge page 900. The cash card recharge page 1000 includes a plurality of serial number fields 1001, where each serial number field 1001 enables a user to input a valid serial number of a purchased cash card. A user name field 1003 is provided to enable the user to insert the user name of a valid cash account that is to be recharged. A password field 1005 is provided to enable the user to enter the corresponding password of the associated cash account. It is noted, however, that the password is optional in an alternative embodiment so that any user with a valid account may recharge that user's or any other user's account utilizing the user name only without the corresponding password. For example, user A may recharge the account of user B by utilizing user B's user name without having to know user B's corresponding password. The cash card recharge page 1000 may further include an ENTER button 1007 which is selected to complete the recharge process.

FIG. 20 is a screen shot of an exemplary account management page 1100 which may be displayed in response to selection of the account management link 604 of the welcome page 600. After a user has activated at least one valid cash account, the account management page 1100 is utilized to manage those cash accounts. The account management page 1100 may include a balance field 1101 that displays the current balance of the cash account. An original amount field 1103 displays the original balance of the account. A number of transactions field 1105 may be used to display the total number of transactions of the cash account. A date field 1107 and a corresponding amount field 1109 may be used to display the date and amount of the last transaction associated with the corresponding cash account.

The account management page 1100 may further include a transaction history link 1111 that transfers the user to transaction history pages that enable a user to track all transactions for the particular cash account. A divide account link 1113 may be provided so that the user may split the existing account into a plurality of different accounts or to create

subaccounts associated with the existing account. For example, an existing account with a balance of $5,000 may be split into two separate accounts, each with $2,500. The two different accounts have different user names and passwords and effectively are independent with respect to each other. Alternatively, the original $5,000 account may be divided into two or more subaccounts, such as five subaccounts, each having $1,000. All of the subaccounts are associated with a master account with a single user name and password and may be utilized for different persons under one master or main account or may be utilized to track different types of transactions.

The account management page 1100 may further include a request funds link 1117 that links the user to corresponding pages that enables the user to withdraw funds from a particular cash account. A reports link 1119 may be provided that transfers the user to pages for displaying any types of reports of the transactions associated with the cash account. For example, a report may list all of the web sites and corresponding purchase amounts, date and time, and any other information for each transaction associated with the cash account. An online banking link 1121 may be provided to enable the user to perform online banking functions using the cash account such as paying bills or transferring money between bank accounts.

The account management page 1100 may further include a delivery preferences link 1123 that transfers the user to one or more pages for enabling the user to set or change one or more default delivery addresses. An account preferences link 1125 may be provided to transfer the user to one or more pages that enable the user to select any preferences associated with the account or transaction functions.

FIG. 21 is a screen shot of an exemplary transaction page 1200 that may be displayed in response to selection of the transaction link 605 of the welcome page 600. The transaction page 1200 may include account information 1201, a delivery preferences link 1203 for setting or changing delivery preferences, an account preferences link 1205 for setting or changing account preferences, and an address field 1207 for enabling the user to insert an address such as a URL or the like to browse or surf the network. It is noted that since specific cash account information is displayed the user has logged onto that account for the transaction. A search link 1209 may be provided on the transaction page 1200 for enabling the user to find goods or services on the network associated with particular merchants coupled to the

network. The search link 1209 may further be divided into a category link 1211 or a site link 1213. A low price search link 1215 may be included that invokes a search function that searches the network, such as the Internet or the like, to find the lowest price of the same or similar goods or services.

FIG. 22 is a screen shot of an exemplary framed transaction page 1300 for facilitating purchases and other transactions by the user. The framed transaction page 1300 includes a header section 1301 that displays information about the cash account in a similar manner as the transaction page 1200. The header section 1301 effectively forms a frame around a browsing section 1303 which is similar to that commonly displayed by a browser. The browsing section 1303 includes standard footer sections 1305 and slide bar functions 1307 for providing the user link information and for facilitating viewing the entire web page as known to those skilled in the art.

The header section 1301 includes similar information as the transaction page 1200. For example, the header section 1301 includes account information section 1309, a buy button or link 1311 for facilitating a purchase selection, an address field 1313 for enabling the user to insert an address for a web page or the like, which is then displayed in the browser section 1303, a delivery preferences link 1315, and an account preferences link 1317 in a similar manner as previously described. The buy button 1311 serves as the buy button 145 in this embodiment when a purchase page is displayed in the browser section 1303. The purchase page is then submitted to the proxy system 107 as previously described. The framed transaction page 1300 is an example of using the proxy system 107 to intercept communications between a user entity and a selected merchant. An alternative method is monitor the HyperText Transport Protocol (HTTP) port communications at the browser level.

FIG. 23 is a screen shot of an exemplary virtual advisor window or page 1400. The virtual advisor page 1400 includes a header section 1401 that provides standard functions such as a logout link 1403 and a help link 1405. The virtual advisor page 1400 may further include an account information section 1407 that displays the account name, balance, and other information associated with the active cash account as desired. The virtual advisor page 1400 further includes transaction links such as a link to account management 1411, a link to the search functions 1413, or a buy button 1415 to the purchase functions. A preset

section 1409 enables the user to program a plurality of links to perform programmable preset functions defined and used by the user.

The virtual advisor page 1400 is typically displayed at the user entity 103 by a locally executed program, such as the virtual advisor program 155 or the like. The virtual advisor program 155 may be downloaded from the servers at the web site supported by the proxy system 107, or may be loaded in any other standard format, such as via a CD-ROM, diskette, etc. The virtual advisor program 155 enables the user to call upon the proxy system 107 in the middle of a session without having to backtrack, or re-open another window from the proxy system site. In one embodiment, a background cache of the last forms visited by a user entity 103 is created as a reference point. From there, communication between the merchant and the user entity may resume the same way as it had before, except that it will be intercepted by the proxy system 107 from that point forward in a similar manner as the framing method. Throughout the transaction process, the user is given the opportunity to log out of the system to release that user from data interception so that the user may resume normal surfing of the network.

Although a system and method according to the present invention has been described in connection with the preferred embodiment, it is not intended to be limited to the specific form set forth herein, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents, as can be reasonably included within the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

1. A method of enabling online purchases via a network and an online proxy system, comprising:

establishing, by the online proxy system, a pre-paid cash account for a user entity, the cash account including a cash balance and being associated an identification value that enables access to the cash account;

providing online access to the cash account upon receiving the identification value;

receiving a purchase request with a corresponding purchase amount from the user entity to purchase selected items from a merchant via the network;

verifying whether the cash balance of the cash account is sufficient to cover the purchase amount; and

providing, by the proxy system, valid charge account information associated with the proxy system to the merchant via the network to consummate sale.

2. The method of claim 1, said establishing further comprising:

receiving an amount of currency;

providing a corresponding serial number;

detecting online inquiry to create the cash account;

receiving and verifying the serial number;

creating the cash account with the cash balance corresponding to the amount of currency received; and

enabling online access to the cash account using the identification value.

3. The method of claim 1, said establishing further comprising:

receiving, at a currency accepting unit, currency and verifying cash amount received;

generating a serial number that encodes the cash amount received;

printing the serial number on a cash card; and

dispensing the cash card.

4. The method of claim 1, said establishing further comprising:

prompting the user entity for a user identification and a corresponding password;

verifying validity of user identification and password according to at least one criteria; and

receiving and storing the user identification and password as the identification value for the cash account.

5. The method of claim 4, said providing online access further comprising:

prompting for the user identification and the password; and

receiving and verifying the user identification and password before providing access to the cash account.

6. The method of claim 1, said receiving a purchase request further comprising:

receiving a purchase page with the purchase amount from the user entity; and

scanning the purchase page for a predetermined keyword.

7. The method of claim 1, further comprising:

displaying a transaction icon at the user entity; and

said receiving a purchase request comprising detecting selection of the transaction icon by the user entity.

8. The method of claim 7, said displaying further comprising:

displaying a transaction frame around a browser window at the user entity; and

providing the transaction icon on the transaction frame.

9. The method of claim 7, said displaying further comprising:

displaying a transaction window at the user entity; and

providing the transaction icon on the transaction window.

10. The method of claim 1, further comprising:

invoking a transaction manager that maintains an online session with the user entity via the network; and

providing, by the transaction manager, a separate session link with the network that is controlled by the user entity via the transaction manager.

11. The method of claim 10, further comprising:

receiving and forwarding, by the transaction manager, browser requests from user entity to the network;

receiving, by the transaction manager, responses from the network; and

forwarding, by the transaction manager, the responses to the user entity.

12. The method of claim 1, further comprising:

invoking an account manager that verifies the identification value and that provides online access to the cash account;

invoking a transaction manager that tracks and manages online browsing by the user entity of merchants via the network;

retrieving, by the transaction manager, the purchase amount from a purchase page from a selected merchant in response to receiving a purchase request from the user entity; and

verifying, by the transaction manager and the account manager, whether the cash balance is sufficient to cover the purchase amount.

13. The method of claim 12, further comprising:

accessing, by the transaction manager, universally accepted charge account information;

populating, by the transaction manager, the purchase page with the universally accepted charge account information; and

forwarding, by the transaction manager, a populated purchase page to the selected merchant.

14. The method of claim 12, said verifying comprising:

comparing, by the account manager, the purchase amount with remaining balance in cash account;

rejecting the purchase request, by the account manager, if remaining balance is insufficient to cover purchase amount; and

accepting the purchase request, by the account manager, if the remaining balance is sufficient to cover purchase amount.

15. The method of claim 1, further comprising:

establishing a debit account associated with a universally accepted creditor; and

corresponding debit account information with the cash account.

16. The method of claim 1, further comprising:

intercepting a confirmation page from the merchant that includes the valid charge account information; and

forwarding a substitute confirmation page to the user entity.

17. The method of claim 1, further comprising:

intercepting a confirmation page from the merchant that includes the valid charge account information;

masking the charge account information from the confirmation page; and

forwarding the masked confirmation page to the user entity.

18. The method of claim 1, further comprising:

receiving and storing default information associated with the cash account.

19. The method of claim 1, further comprising:

tracking transaction activity of each of a plurality of cash accounts; and

generating aggregate purchase information associated with the plurality of cash accounts.

20. The method of claim 1, further comprising:

tracking purchases associated with the cash account; and

awarding reward points to the cash account for eligibility to receive spending or purchase-related promotional goods or services.

21. The method of claim 1, further comprising:

detecting a search request associated with the purchase request from the user entity;

identifying selected items in the purchase request; and

conducting an online search for pricing of items similar to the selected items.

22. The method of claim 1, further comprising:

invoking an account manager that enables the user entity to perform management functions on the cash account.

23. The method of claim 22, wherein the management functions further comprise:

splitting the cash account into a plurality of dependent subaccounts.

24. The method of claim 22, wherein the management functions further comprise:

dividing the cash account into a plurality of separate and independent cash accounts.

25. An online purchase system using a network, comprising:

a communication system that enables communication via the network;

an account activation system that creates a cash account, comprising:

a serial number verification system that verifies validity of a serial number received via the communication system from a user entity;

a serial number decoding system that decodes a monetary value from the serial number to establish an initial account balance;

an identification system that establishes an identification value to enable online access to the cash account by the user entity; and

a charge account system that associates the cash account with valid charge account information;

an account manager that enables access to the cash account, that compares a purchase request with an account balance to verify sufficient funds, and that maintains an accurate account balance; and

a transaction system that serves as a proxy for the user entity to access online merchants, that detects a purchase request from the user entity, that cooperates with the account manager to verify sufficient funds, and that provides the charge account information to a selected merchant to complete a purchase.

26. The online purchase system of claim 25, further comprising:

a receiving entity that receives currency and that provides the serial number in exchange.

27. The online purchase system of claim 26, the receiving providing the serial number on a cash card.

28. The online purchase system of claim 27, the serial number being preprinted on the cash card.

29. The online purchase system of claim 27, the receiving entity further comprising:

a validation unit that prints the serial number on an unvalidated cash card to provide a validated cash card upon purchase.

30. The online purchase system of claim 29, further comprising:

the cash card including a magnetic strip incorporating a partial serial number; and

the validation unit reading the partial serial number from the magnetic strip, generating a valid serial number and printing the valid serial number on the cash card.

31. The online purchase system of claim 30, the validation unit comprising:

a processor;

a memory;

a magnetic reader; and

a printer.

32. The online purchase system of claim 30, further comprising:

an encryption unit that encodes the monetary value into the valid serial number.

33. The online purchase system of claim 32, wherein the encryption unit further encodes any combination of other information into the valid serial number, the other information including card sponsor information, location information, and temporal information.

34. The online purchase system of claim 27, the receiving entity further comprising:

a dispensing unit that receives cash and dispenses a cash card.

35. The online purchase system of claim 34, the dispensing unit further comprising:

a validation unit that prints the serial number onto an unvalidated cash card to provide a validated cash card.

36. The online purchase system of claim 35, further comprising:

the cash card including a magnetic strip that incorporates a partial serial number; and

the validation unit reading the partial serial number from the magnetic strip and generating a valid serial number.

37. The online purchase system of claim 36, the validation unit further comprising:

an encryption device that encodes the monetary value into the serial number.

38. The online purchase system of claim 37, further comprising:

the encryption device further encoding any combination of other information into the serial number, the other information including card sponsor information, dispensing unit information and temporal information.

39. The online purchase system of claim 38, further comprising:

the serial number decoding system decoding the serial number to retrieve encoded information from the serial number.

40. The online purchase system of claim 25, the identification value comprising:

a user identifier and a password, both arbitrarily determined by the user entity.

41. The online purchase system of claim 25, the account manager further comprising:

memory for storing cash account information; and

a database management program that accesses the cash account information to enable online transactions.

42. The online purchase system of claim 41, further comprising:

a data encryption program that encrypts cash account information into the memory.

43. The online purchase system of claim 25, the transaction system further comprising:

a transaction program that maintains a session with the user entity via the network and a separate link with the network that is controlled by the user entity.

44. The online purchase system of claim 43, further comprising:

the transaction program intercepting and forwarding purchase pages; and

upon detection of a purchase request, the transaction program populates a purchase page and returns to a corresponding merchant via the network.

45. The online purchase system of claim 43, wherein the transaction program intercepts a confirmation page from a merchant, masks charge account information, and forwards a masked confirmation page to the user entity.

46. The online purchase system of claim 43, wherein the transaction program

intercepts a confirmation page from a merchant and forwards a substitute proxy purchase page to the user entity.

47. The online purchase system of claim 25, the transaction system further comprising:

a transaction program that interfaces the account manager; and

a virtual advisor operating remotely at the user entity that cooperates with the transaction program to conduct online transactions.

48. The online purchase system of claim 47, further comprising:

the virtual advisor operating as an intermediary to enable the user entity to browse merchants directly; and

the virtual advisor intercepting a purchase request and corresponding with the transaction program via the network to complete a purchase.

49. The online purchase system of claim 25, further comprising:

a search engine that conducts online searches for merchants with similar items selected by the user entity.

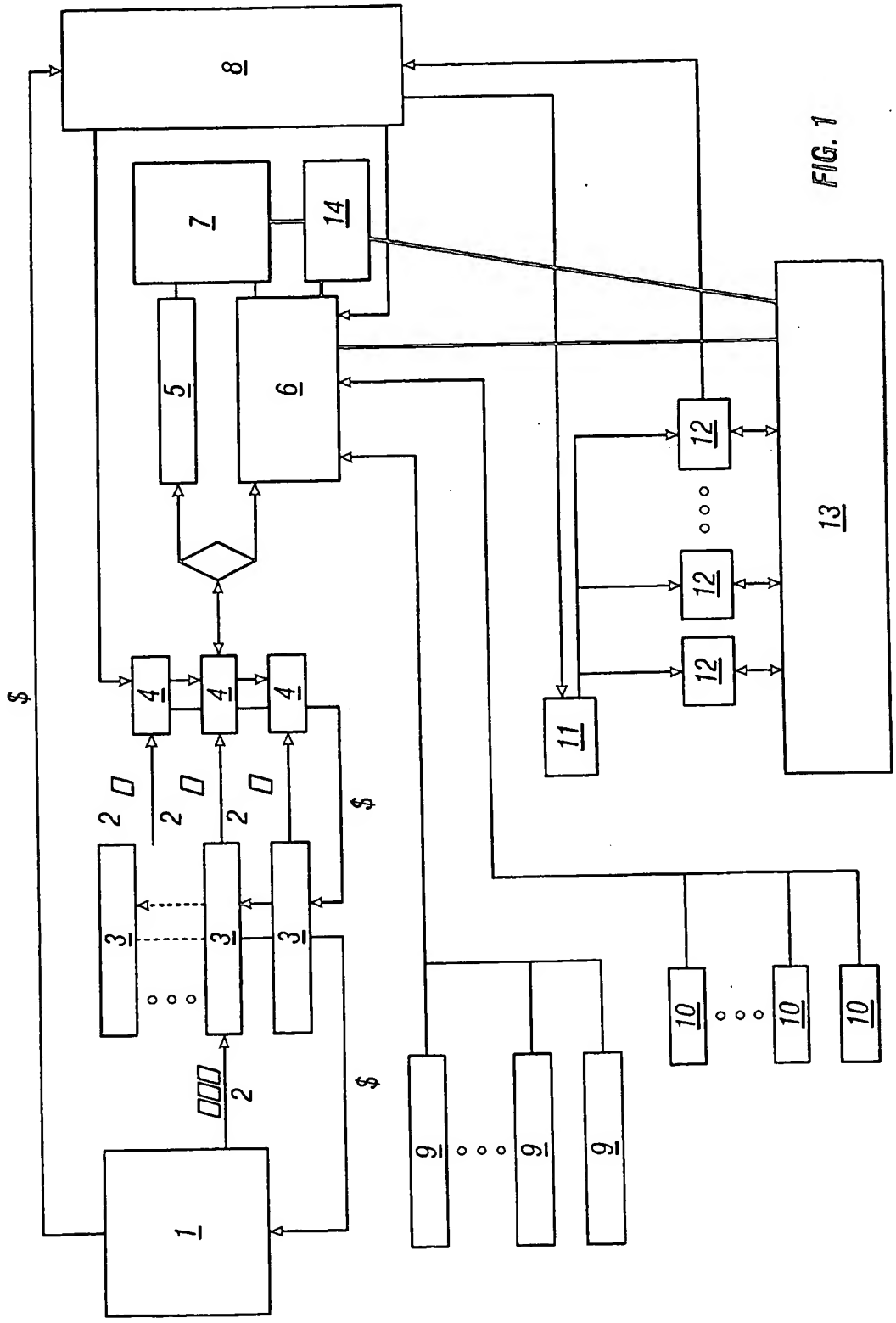

FIG. 1

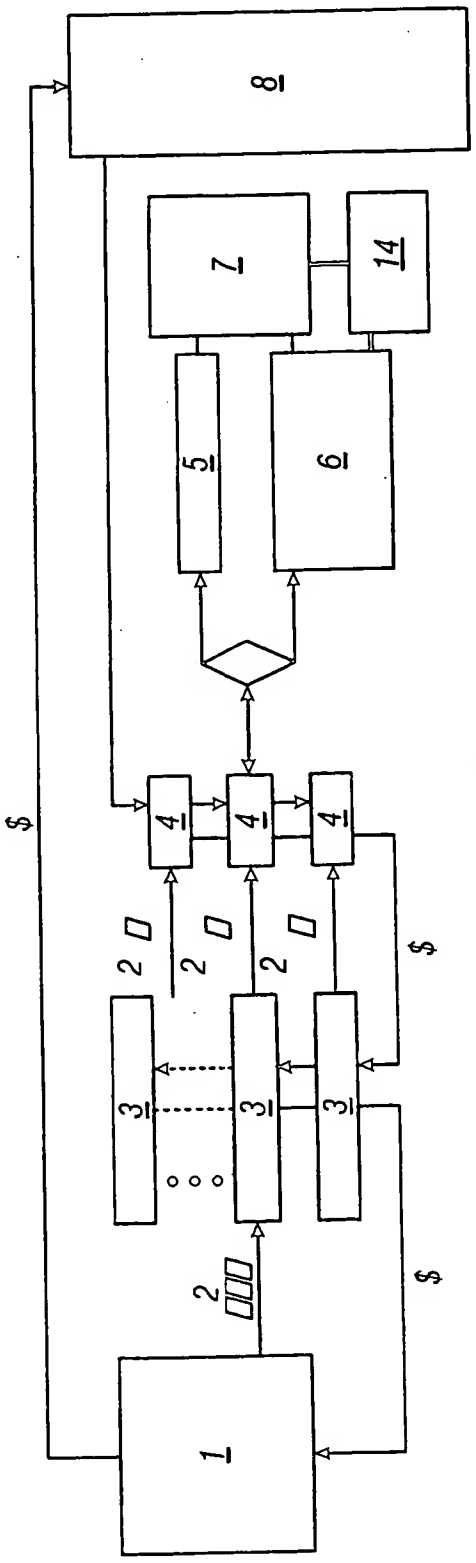

FIG. 2

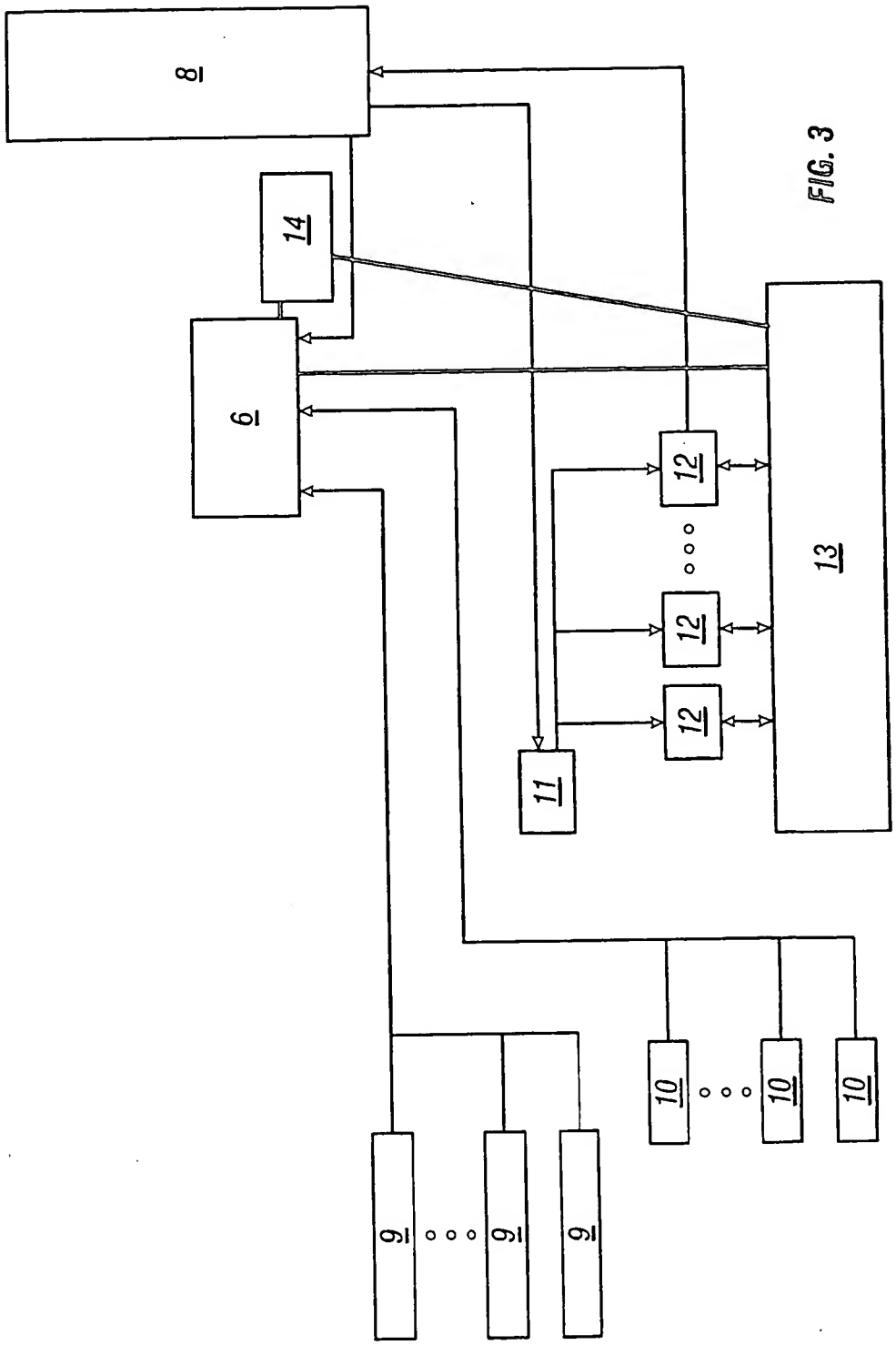

FIG. 3

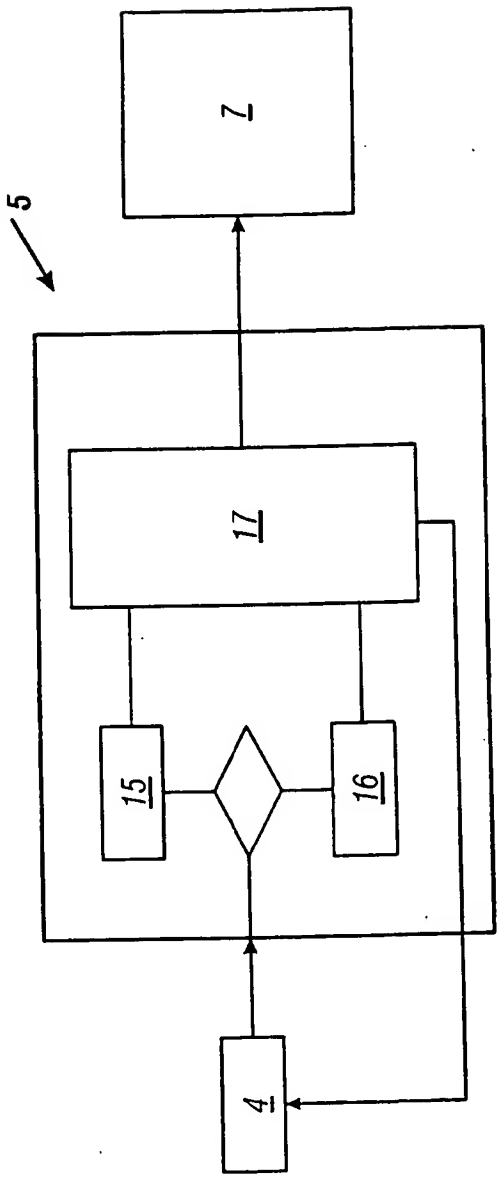

FIG. 4

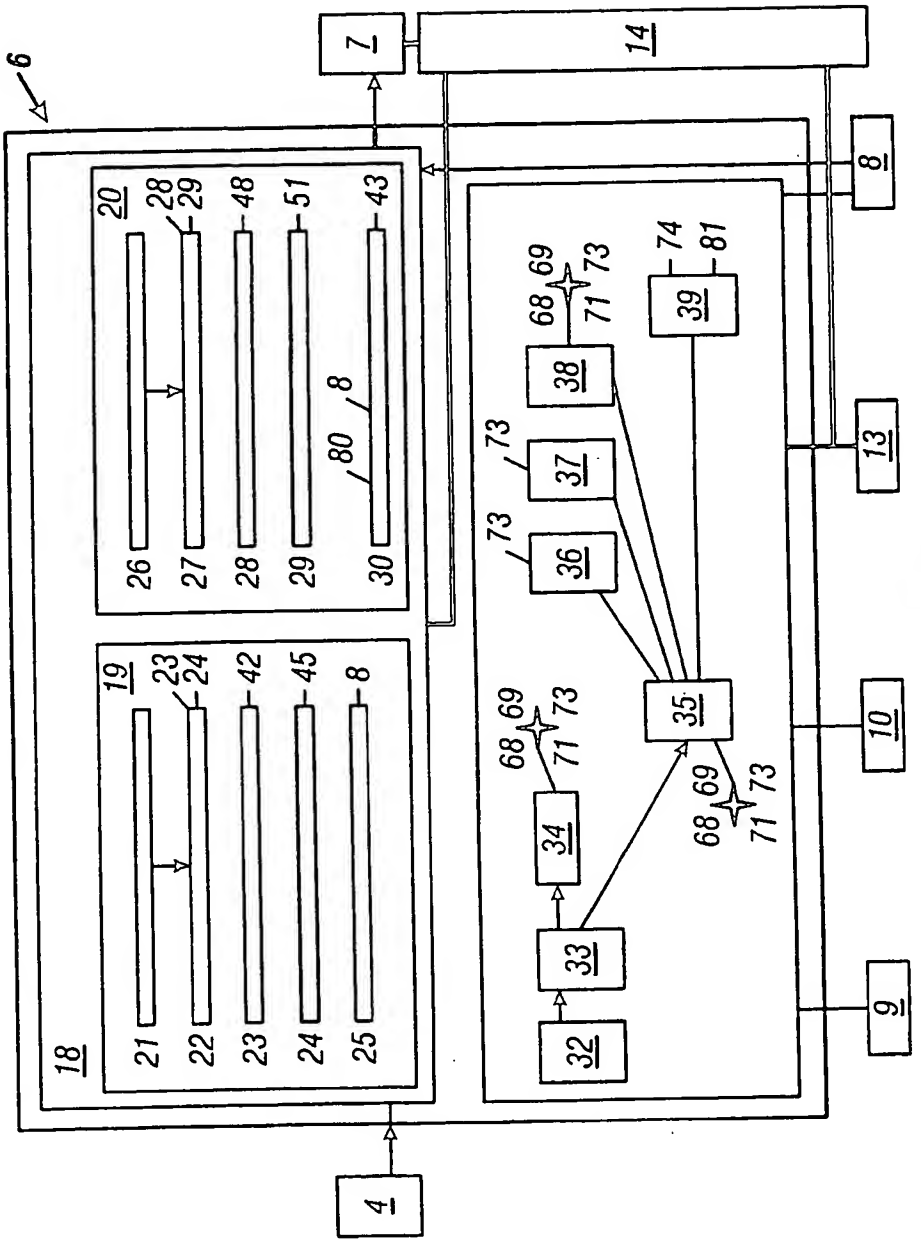

FIG. 5

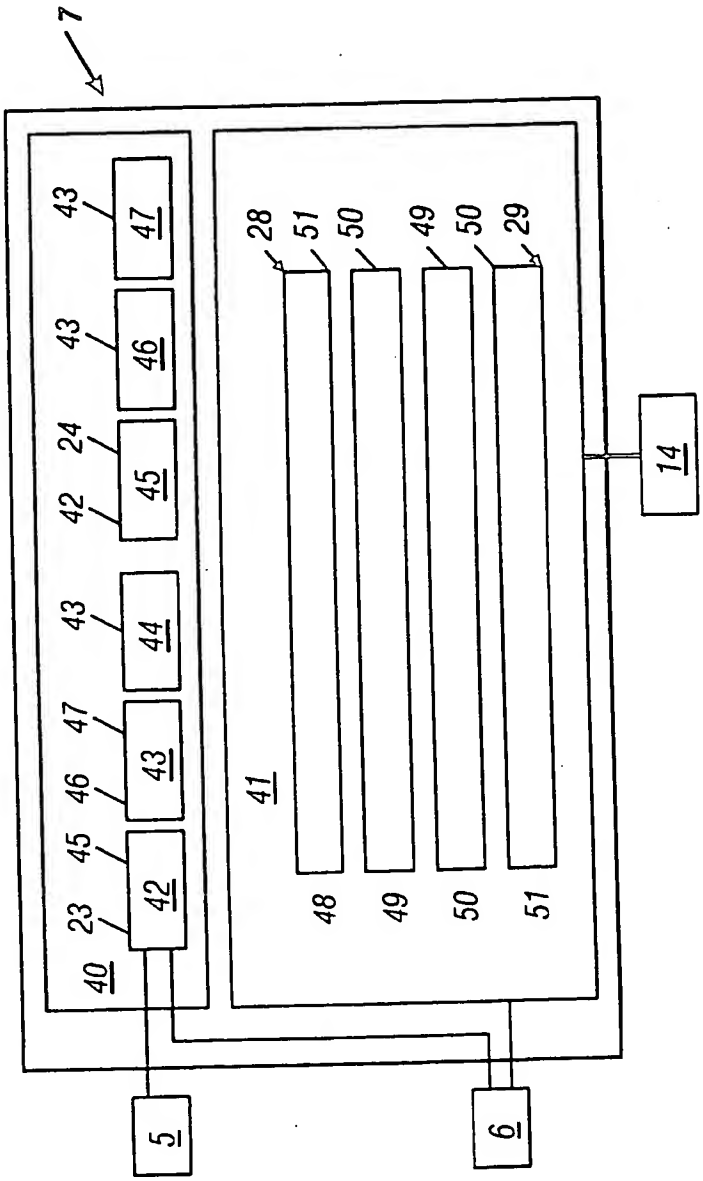

FIG. 6

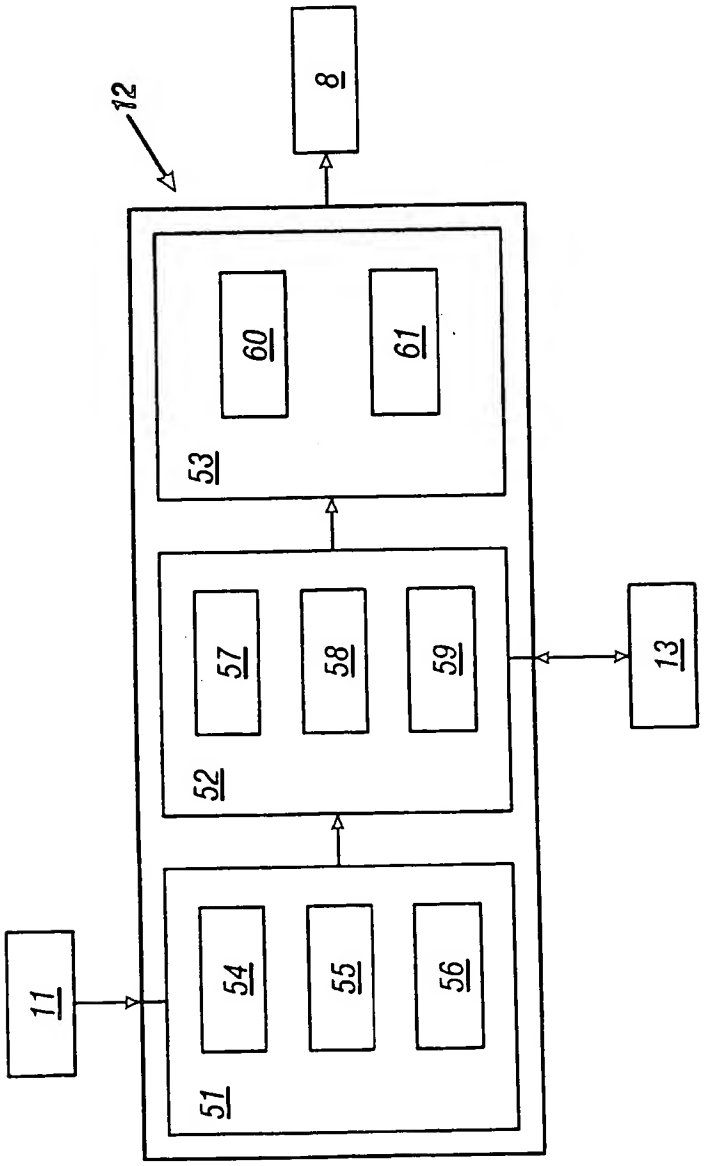

FIG. 7

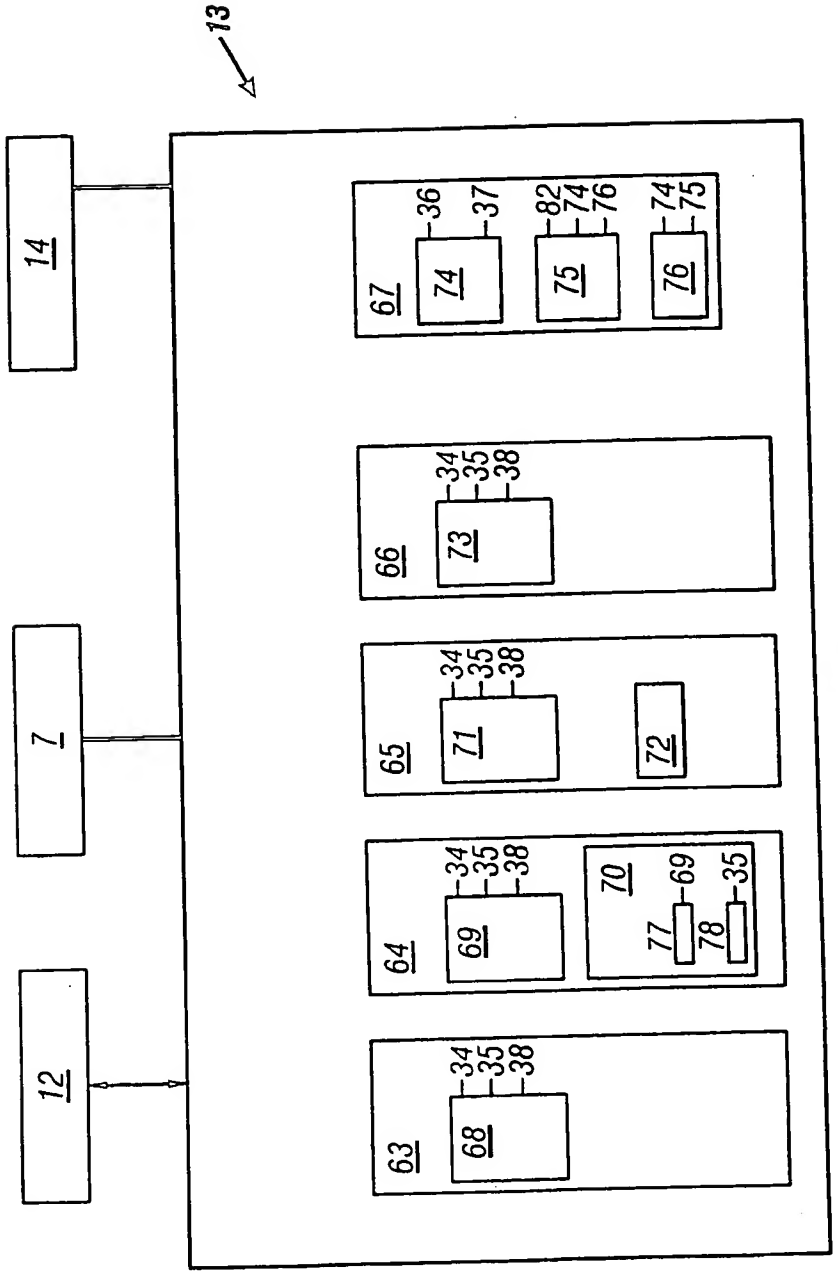

FIG. 8

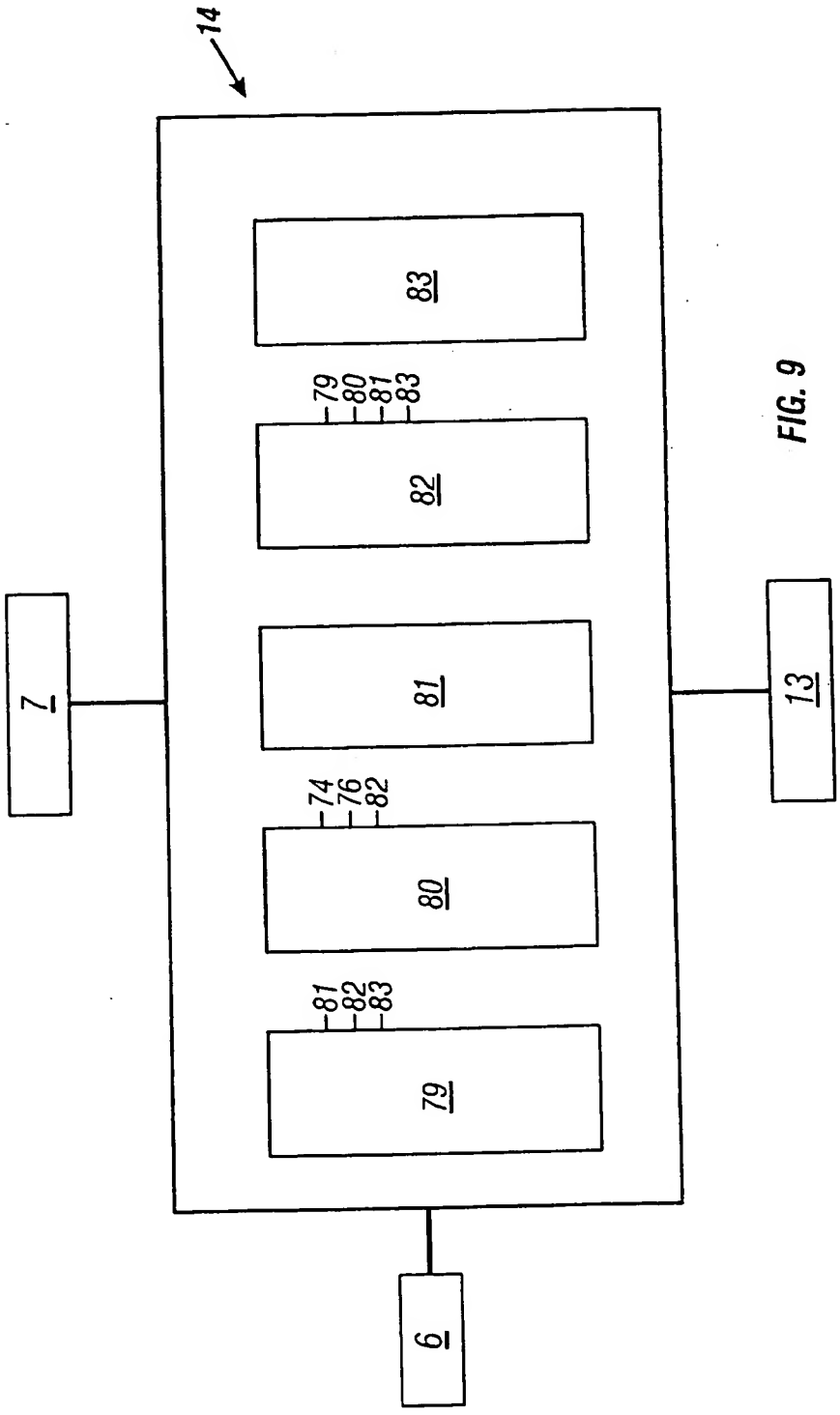

FIG. 9

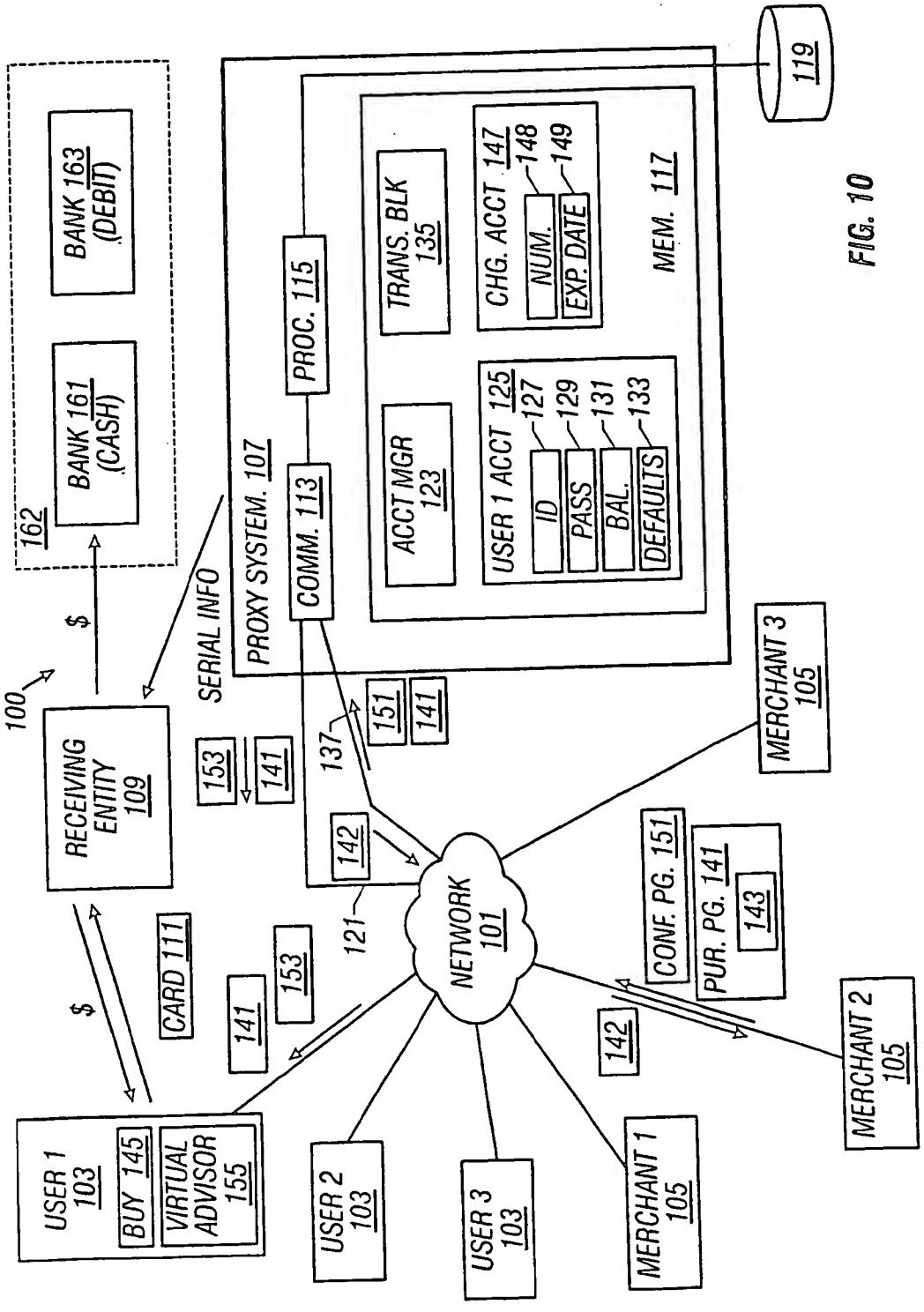

FIG. 10

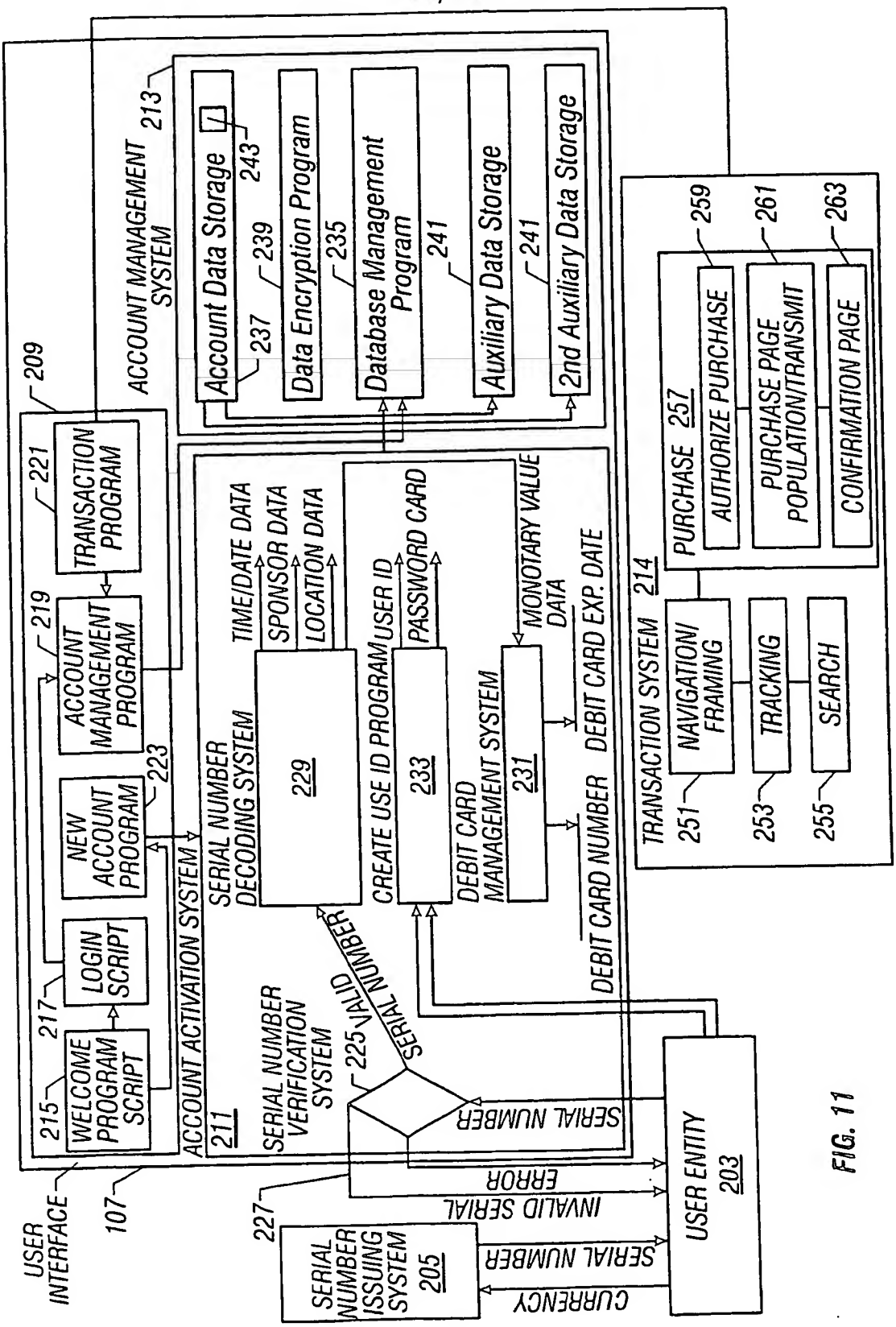

FIG. 11

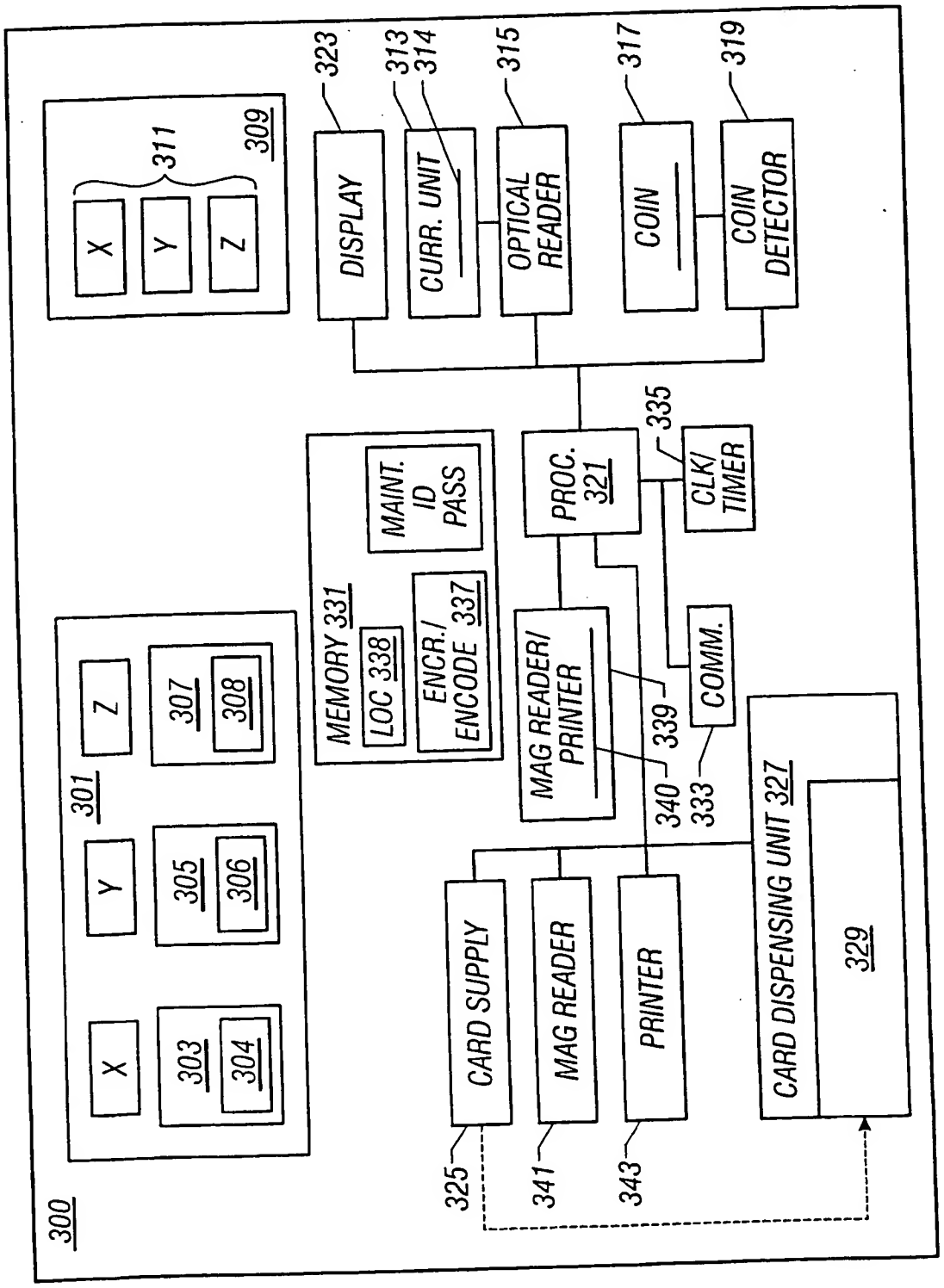

FIG. 12

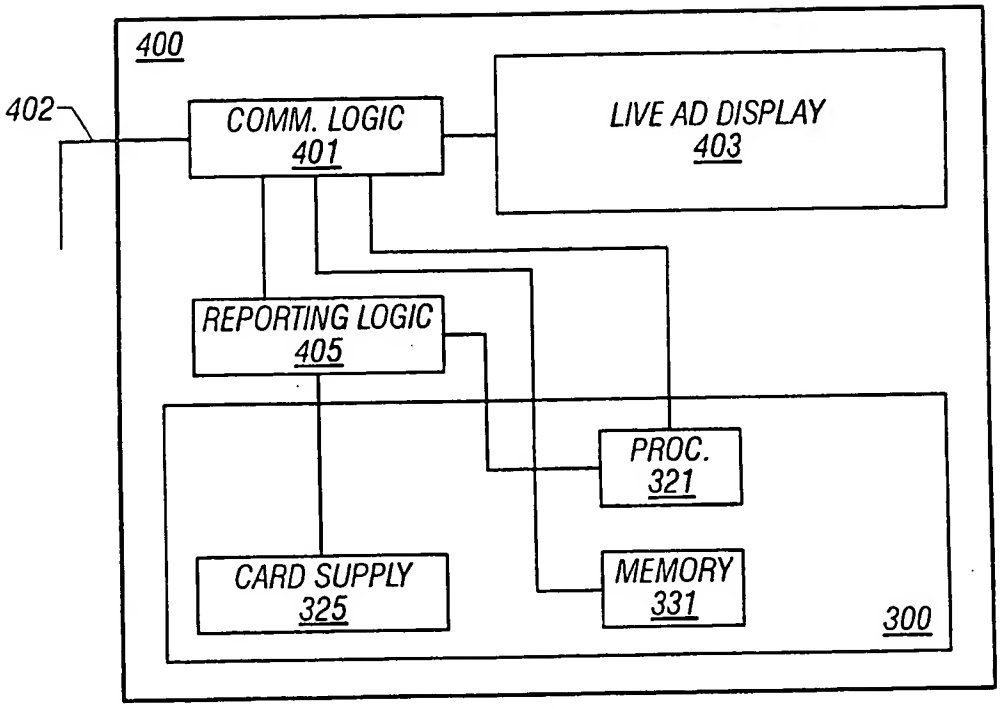

FIG. 13

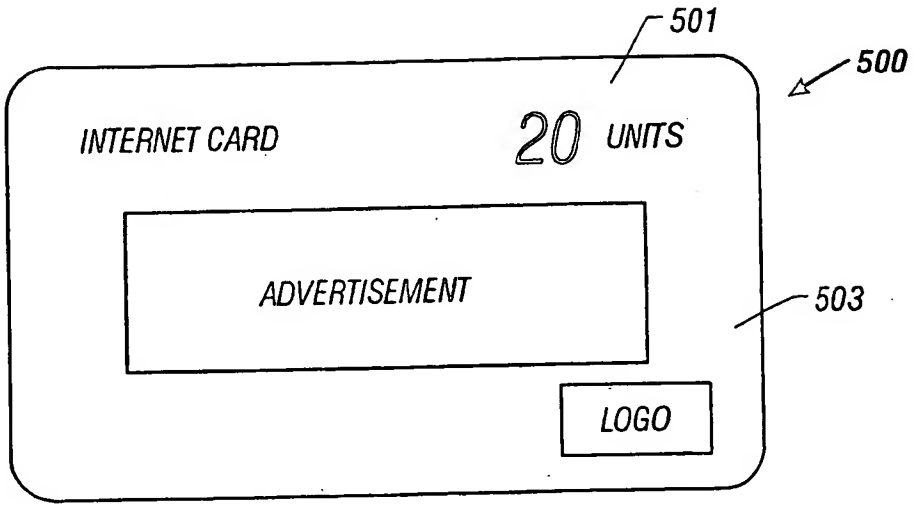

FIG. 14A

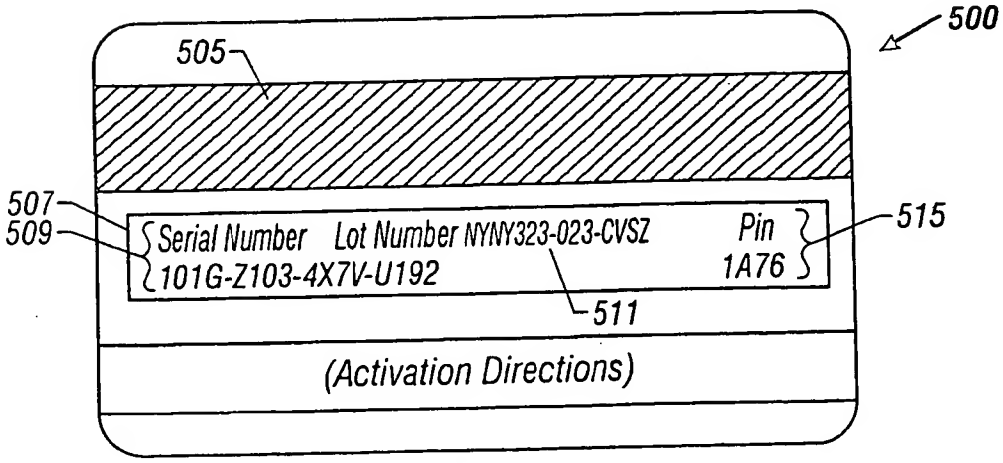

FIG. 14B

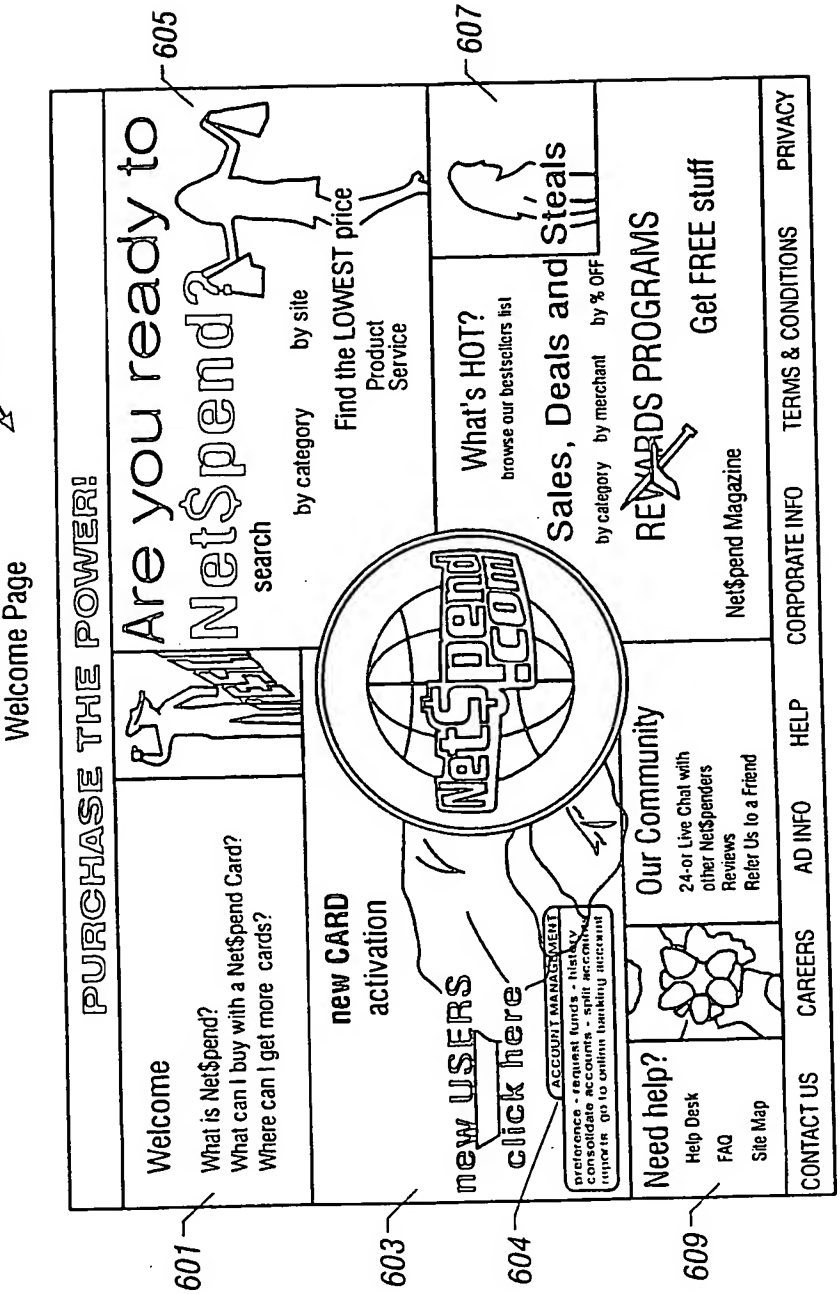

FIG. 15

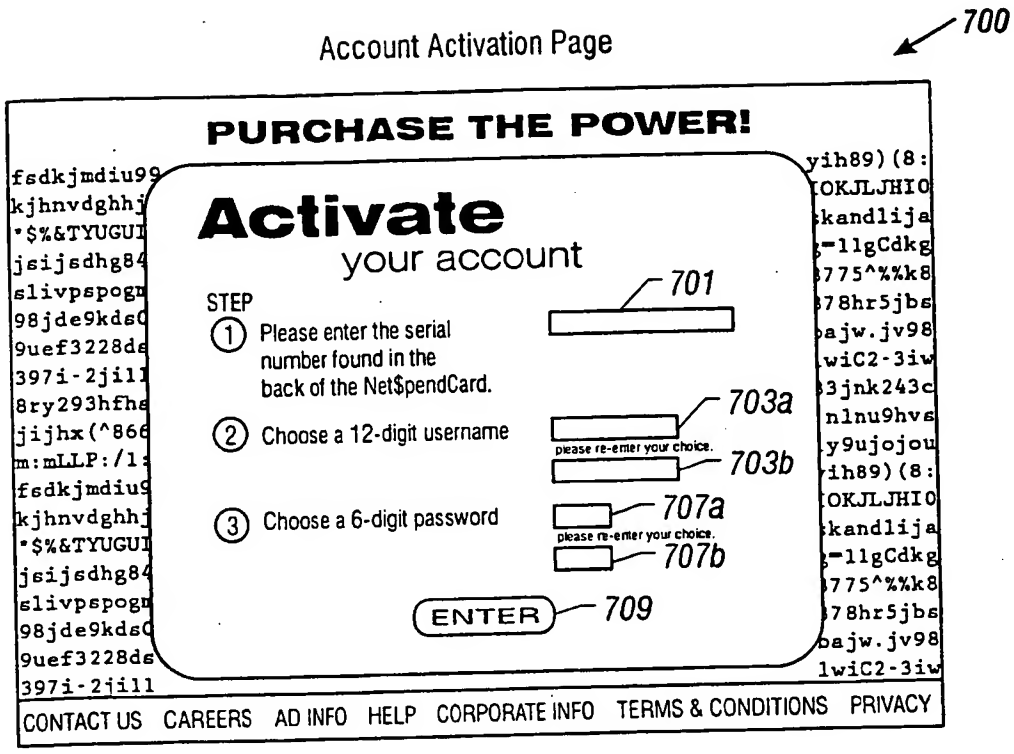

FIG. 16

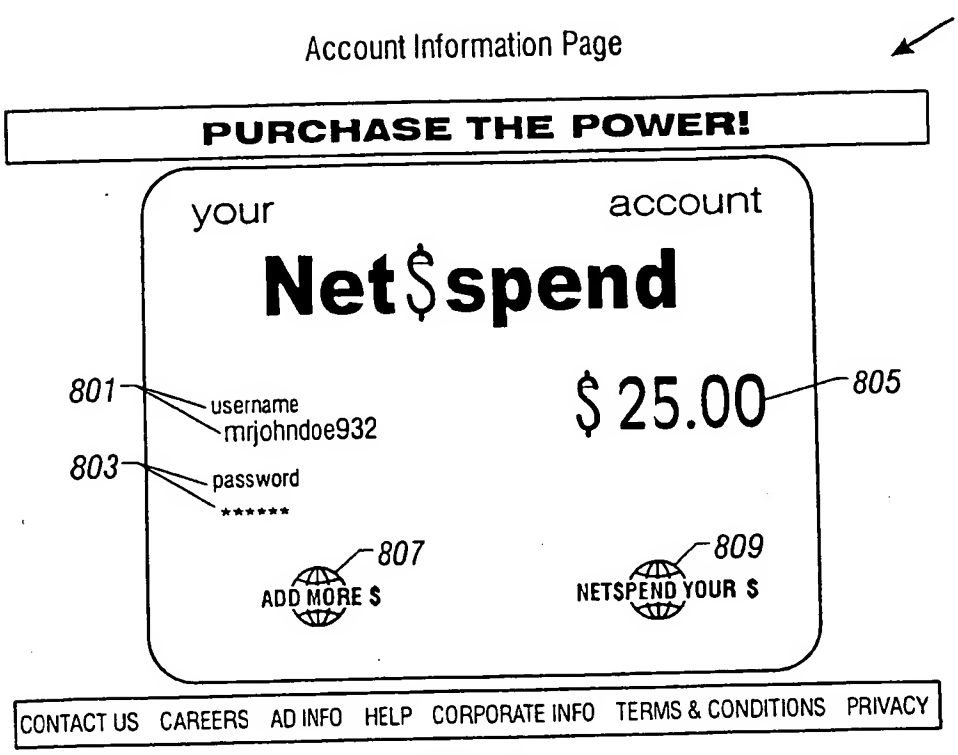

FIG. 17

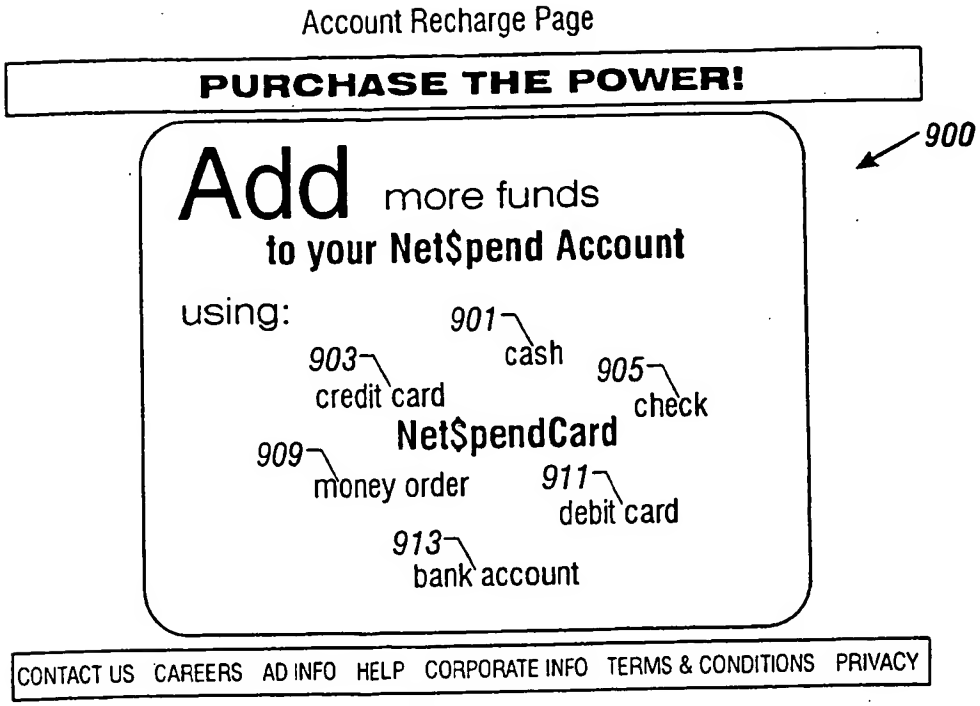

FIG. 18

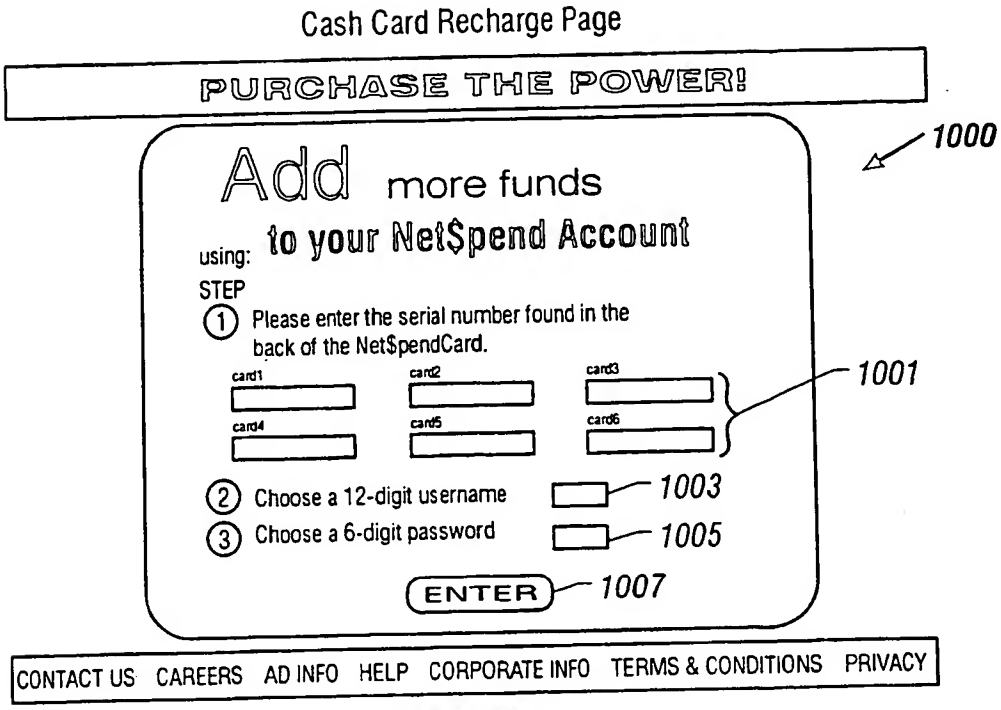

FIG. 19

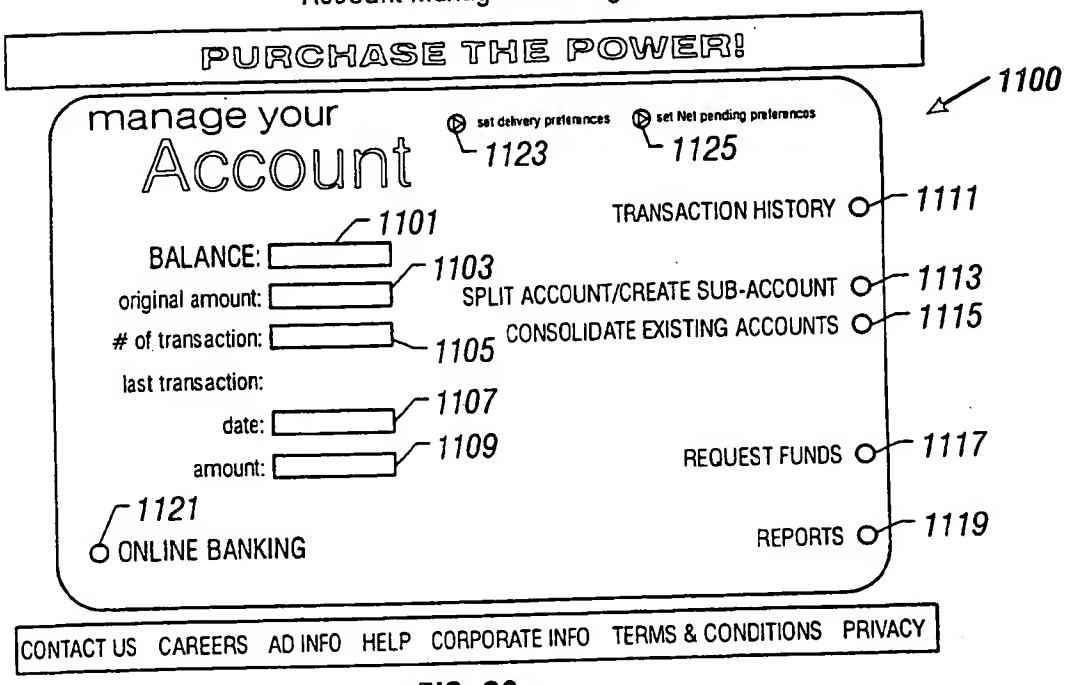

FIG. 20

Cash Transaction Page

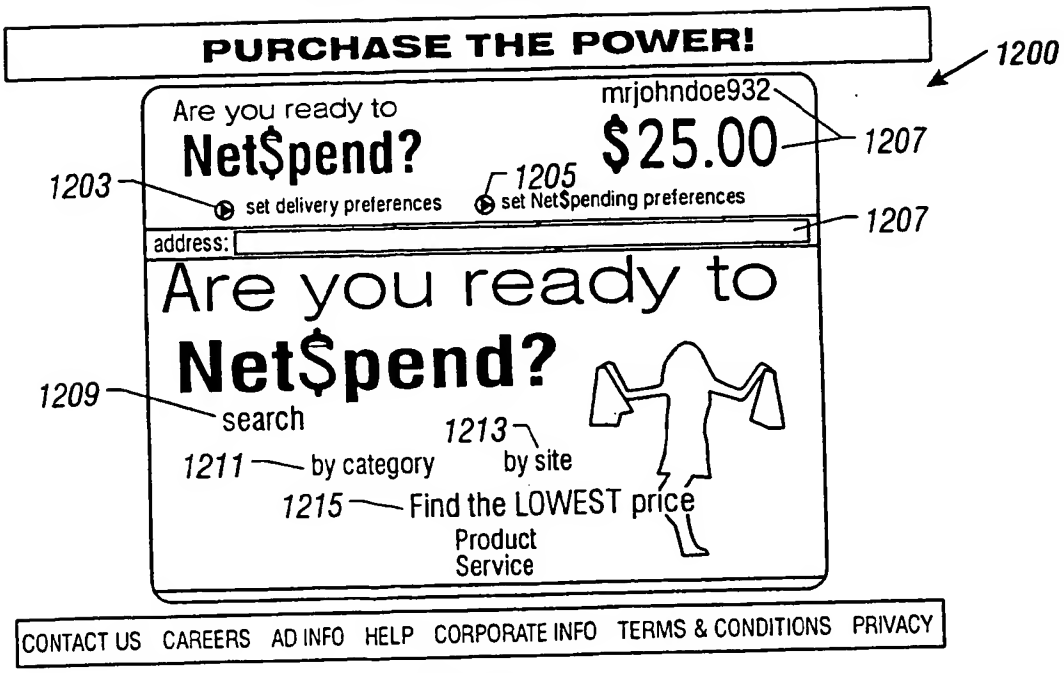

FIG. 21

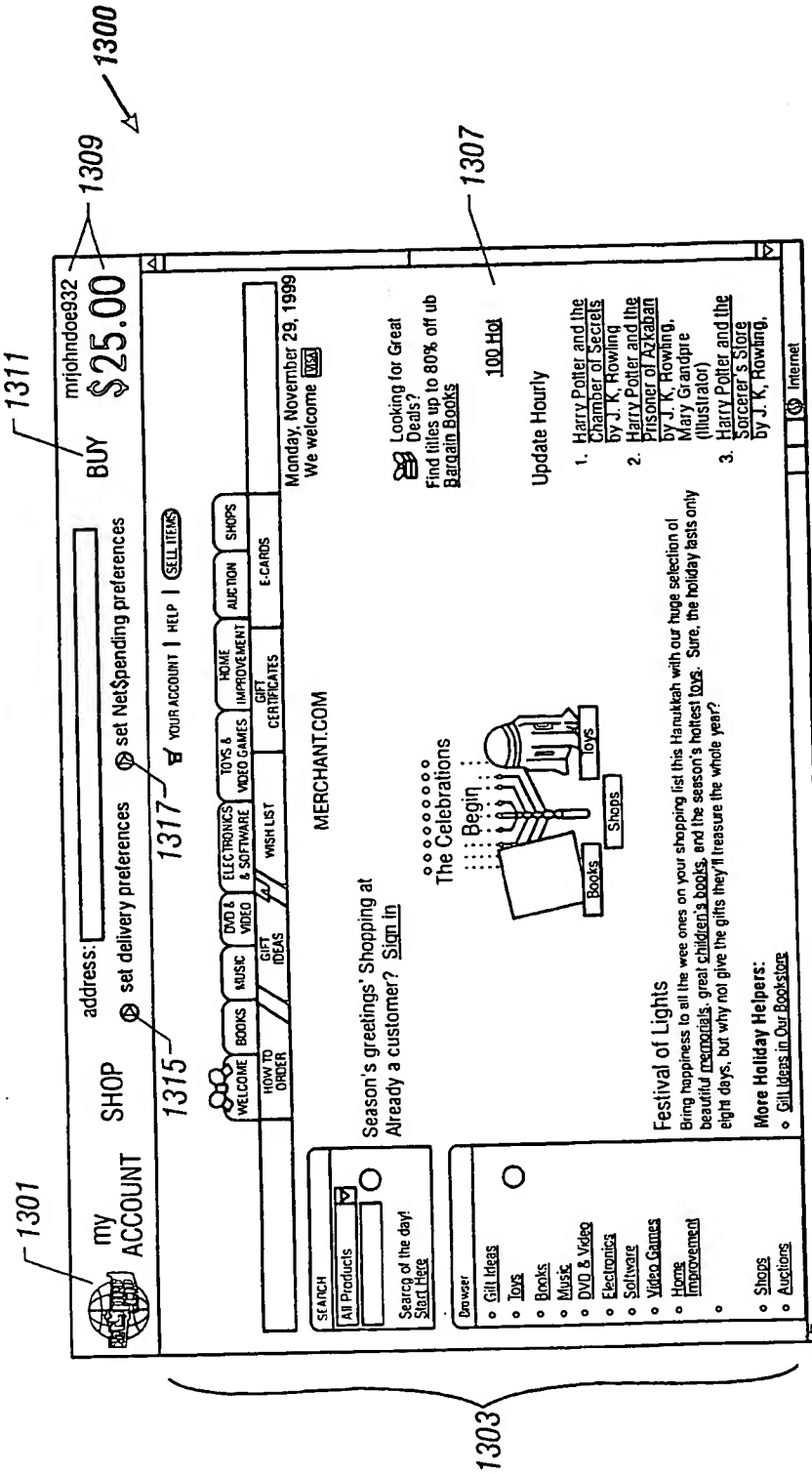

FIG. 22

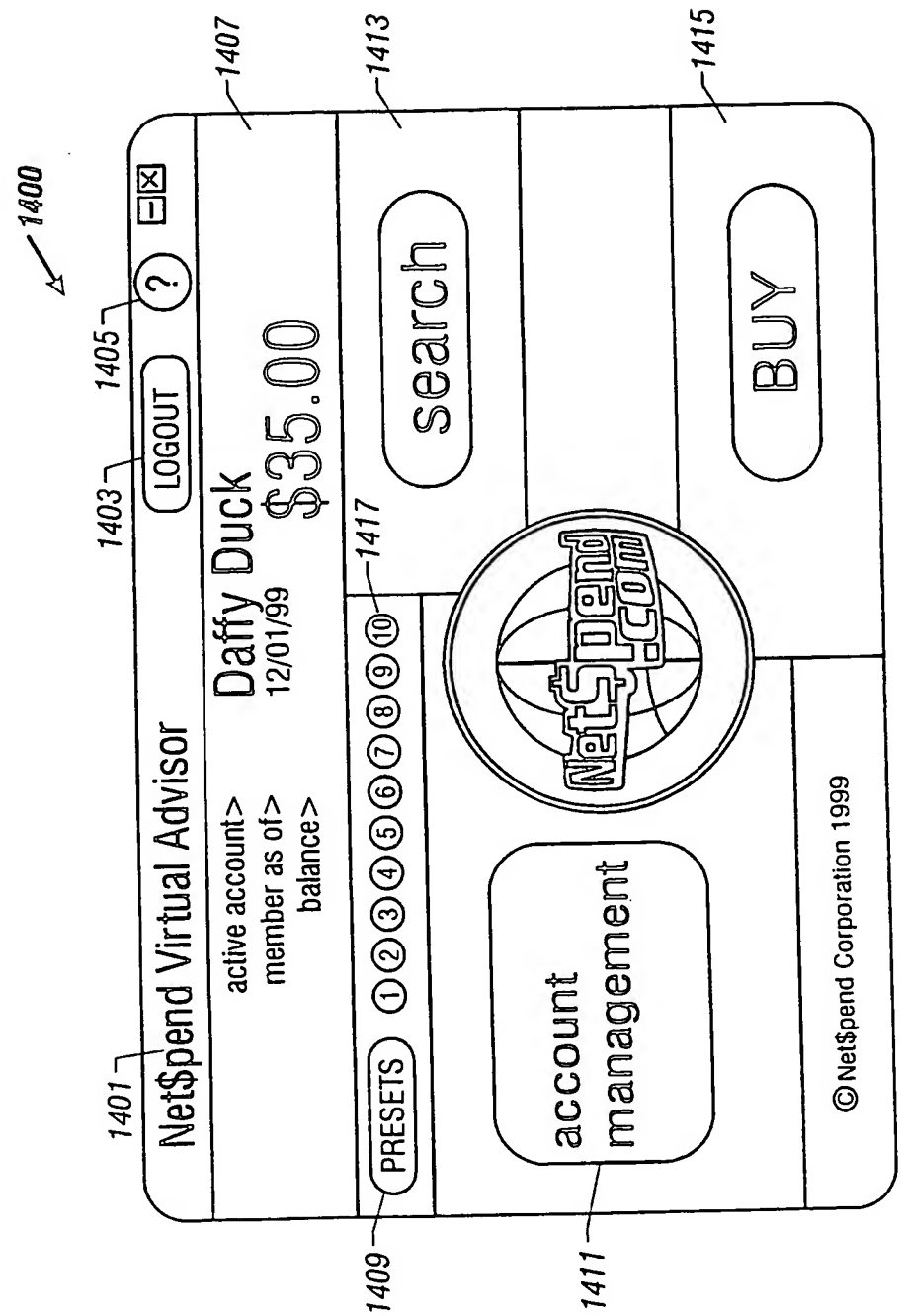

FIG. 23

INTERNATIONAL SEARCH REPORT

Int. ational application No.
PCT/US00/23413

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 13/14,17/60,15/20; H04L 9/32;
US CL : 709/219;705/39,23; 380/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 709/219;705/39,23; 380/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 5,961,593 A (GABBER et al) 05 October 1999 (05.10.1999), entire document	1-49
A	US 5,745,886 A (ROSEN) 28 April 1998 (28.04.1998), entire document	1-49
A	US 5,794,207 A (WALKER et al) 11 August 1998 (11.08.1998), entire document	1-49

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 October 2000 (30.10.2000)	26 DEC 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer JAMES TRAMMELL Telephone No. 703-305-3900

Form PCT/ISA/210 (second sheet) (July 1998)